SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1946.—Vol. XLII.] LONDON, SATURDAY, DECEMBER 7. 1872. {PRICE.....FIVEPENCE PER ANNUM, BY POST, £1 4s.

Original Correspondence.

THE NEW GOLD DISTRICT—ISLAND OF ARUBA.

Sir,—The important and interesting account in the Supplement to the *Mining Journal* of Nov. 23 of the enterprising efforts of the Americans in the modern scientific development of the golden treasure of this island must have been read with pleasure by your general readers, but especially so by all in the neighbourhood of the Bank of England, at a moment when the energies of financeers, aided by the power of a free press, are directed to all parts of the globe from whence the precious metals can be obtained, and their early arrival in England recorded.

The name Aruba may be simply termed a modernisation of the Spanish words "Oro Uva"—literally "Grapes of Gold"—and this view may receive confirmation from the fact that heavy and very pure gold has been found in the island, as it is sure to be again. Your report on Saturday last refers to a nugget of 44 lbs. having been found by agents of the Government of the country, but the writer of this has stood on the spot where a nugget of upwards of 50 lbs. was found by accident by a slave on his Sunday holiday, and acquired with some trouble in its detachment from its resting place by his master. Other nuggets of heavy gold, of 3, 4, 5, 7, and 12 lbs. have also been recorded, and a great deal of heavy gold was found between 1825 and 1850 in the beds of the rivers and the mountain streams, as well as native gold at the surface of quartz veins or lodes.

The natives were possessed with the belief that they must follow the "Linea de Oro," and that beyond its supposed range it was useless to look for gold. Many of them were, and are, very expert and good jndges of the metal, but it was subsequent to 1855 the conviction was brought home to some that gold could be found in a wider range than before prescribed, whilst their means of obtaining it were very limited.

The Government having relinquished the works, and the constitution of the Netherlands having vested in the king, under the advice of his counsels, power to grant concessions of these mineral rights, one was granted in 1854, under which preliminary steps were taken to test the extent and character of auriferous deposits, as well as those of copper, which had previously not been found, and of other minerals, with a view to large works.

In 1856 arrangements were made with eminent firms in London and the country for an exploration and proof of the reported treasures of this island (then almost unknown to and seldom visited by English, as from the dryness of the climate the native products for exportation were few, and the population and their wants limited and easily supplied), but such arrangements were broken off by erroneous information as to the concession transmitted, in the absence of any enquiry, by a Netherlander, wholly unconscious of the injury he might inflict on others by replying to a question without enquiry at the Colonial Office.

This led to further delay in the arrangements for proofs desired, and subsequently under contracts about 900 tons of quartz were shipped to this country, when the works intended for their treatment were never completed, so that the same could not be effectually tried in bulk; all the trials, however, in various ways, in bulk and in quantities of from 1 to 20 tons, showed returns of from 7 dwts. to 1⅞ oz. of fine gold per ton in bulk, individual assays ranging from 5 or 6 dwts. to upwards of 500 ozs. fine gold per ton; this auriferous character being confirmed by the 800 tons afterwards shipped to the United States, with the benefit of experience gained by the first opening of the lodes for these purposes.

In the year 1872, when officials and auditors of such companies as the Port Phillip can certify that returns of only 4 dwts. fine gold per ton will not only pay expenses of treatment in Australia, but yield a profit, and such output is obtained from reefs all of a similar character, your readers may try to calculate what the amount of returns should be from a country possessing a far greater extent of auriferous district than the Port Phillip Company, and in which stamping power, to be worked by wind and steam, can be multiplied in proportion, but in making their calculations for an average from all sources they must bear in mind, and keep vividly before them, the almost certain fact that in carrying on extensive works on this island rich deposits of native gold will be found both in or adjacent to veins or lodes, as well as alluvial and heavy gold, and gold also disseminated in various ways, independent of, or combined with, other minerals or metals. And from the extent and riches of the country, when sufficient stamps and amalgamating mills are efficiently worked, something approaching to 400,000 tons of lode-stuff, or auriferous rock, should be treated annually, and which if it only produced an average of 5 dwts. fine gold per ton of stuff would produce a gross return, at the value of the ordinary gold of Aruba, 400,000*l.* per annum: ¼ oz. per ton average would yield 800,000*l.* per annum; and 1 oz. 1,600,000*l.* per annum gross returns. These figures may read large to some, but they will bear test, and it is utterly impossible for anyone at all acquainted with mining, who has ever resided any length of time in the island, and paid any attention to this subject, to stand on the slopes of the higher mountains in this island, and overlook the extent of auriferous districts, intersected by lodes and cross-courses, in what a Cornishman would call from his heart a most congenial country, and as yet being only scratched on the surface, to say what limit can be fairly placed on the actual value of the wealth to be developed in Aruba by a combination of capital, science, skill, judgment, prudence, and honesty. Even our American friends, with all their talent for description, have on this occasion not come up to the mark. Strangers to him, the writer would presume to say they have in their description not done justice to this island, or the prize they have acquired. They have beaten John Bull hollow, for John had the guardianship of the island during the Peninsular war, and saw nothing in it; whilst from 1860 to 1867 English capitalists, promoting the discoveries of gold, considered the Montes Aureos, the East del Rey, the Cambrian, the Welsh Gold, and many others, more sure and certain fields for the investment of capital.

When Devon Great Consols was brought under notice Mr. Jehu Hitchins did not easily find 1050*l.* for the first 1*l.* shares issued. That company has represented during its existence over one million —not dollars, but pounds sterling. If Capt. Richards was now in Aruba could he say that Devon Great Consols did, or would ever, rank in value with that island, where the permeation of gold in the Piedras can be traced right and left, north and south, east and west, in so many districts? If gold were disseminated with regularity through quartz, or in ores, a return of 5 dwts. per ton shows an equivalent to a yield of 1 grain of gold in every 18 lbs. weight of ore, ½ oz. in 9 lbs., 1 oz. in 4½ lbs., and it is by the non-observation of this fact and the neglect and refusal to judge by returns "from a bulk" efficiently treated, according to its character, and not from small samples, so many mistakes have been made, and losses incurred. Now, the treatment of auriferous ores is admittedly a science, which can be followed in a commercial point of view as profitable; and it will be difficult to find in Cosmo mining circles a single company which posseses greater, if as many, resources of undeveloped wealth, for its extent, than the Island of Aruba.

As the deportation of native gold from the island was illegal without a certificate of ownership, duly registered and admitted by the Government officials, and the duty of 2½ per cent. paid thereon, and no vessels could leave the coast without their direct or indirect knowledge, the amount of gold found and exported can, of course, be certified by the respective Governors of the island to the date of the concession of December, 1867. VERUM.

Dec. 5.

COAL MINES REGULATION ACT, 1872.

Sir,—Who is to be Manager? has now (in the Home Office letter to the Inspectors) received an important illustration and (so far as is reasonably practicable) definition, by specifying who are qualified and who unquzlified to obtain "certificates of service." It closely tallies with my forecast on the subject. There will, no doubt, be very many epicene cases which will very much perplex the Home Office, in the *application* of the rule promulgated. Whoever is inclined to doubt the wisdom of the rule should carefully consider the various functions which the Act imposes on a "a manager," and the extent of education necessary for their due performance.

A Scotch correspondent of mine has seemed rather to suppose that a manager will be certificated for a given mine, but this is not so; a certificate once given will be *good for any part of the United Kingdom.*

The certificate of service being obtained, the solution of the question—Who is to be manager?—will rest between the "owner" and the certificated "manager"—what extent of work will the owner entrust, and what will the other undertake.

"Owners" who desire to be their own "managers" must of course, be careful to apply for the certificate of "service," if they have hitherto *so* acted "in the capacity of manager" as to satisfy the Home Office requirements.

The abstract of the Act, and the various forms issued, seem ably done, though the register of workers attending school will alarm some persons, but in practice will be found, I think, smooth enough.

I had compiled for the new edition of my little book (also for a like edition of "The Metalliferous Mines Act, on which I also am engaged) a set of *all* forms for *all* cases under the Act, and some of them will now be superseded; but there are many important things to be done, rendering very desirable the use of forms which the Home Office has not dealt with. These forms I am now revising in the light of these recent official documents, and with a view to presenting a plain guide to plain men what to do, and how to do it.

Bilston, Dec. 3. JOHN WILLIM HALL.

THE MINES REGULATION ACT.

Sir,—The attention of the committee appointed by the coalowners of Yorkshire to draw up a code of Special Rules having been called to the leading article in your paper of last week, I beg, on behalf of the committee, to say that you have been misinformed as to the opinion given by the Inspector of Mines for this district, referring to the persons who are to receive certificates as managers under the Act. In justice to the Inspector, the committee would feel obliged by your inserting this contradiction in your next issue.

Wakefield, Dec. 5. W. STEWART, Chairman of the Committee.

THE HERMON PRIZE ESSAYS, AND THE 500 COMPETITORS.

Sir,—Twelve months have now nearly elapsed since the competitors finished their work to compete for the prizes offered by Mr. E. Hermon, M.P., for the best Essays on Gas Explosions in Coal Mines, and nothing has yet been done to prevent these miserable disasters, although several accidents have recently taken place, many men having lost their lives, and many more having been injured for life.

I think it is exceedingly unfair to leave all those writings unnoticed for so long a time, and all efforts ought to be made to see the matter settled, and something be done for the poor miners. For this purpose a meeting of all the competitors is proposed to take place, in London or elsewhere, to give everyone the chance to speak for his idea on the subject, and I think that this is the proper way to get a perfect Essay out of the 500—as everyone can oppose ideas not approved of, and a committee may be chosen to consider all the Essays. As for the day to be selected for such a meeting, it is proposed to take place some time in January next, the day to be fixed through the *Mining Journal.* All gentlemen who may be desirous of supporting this proposal, and who are likely to appear at the place of meeting, will oblige by sending their names and addresses to the Editor of the Journal. Mr. E. Hermon, M.P., will be invited by special letter to take the chair at the meeting.

Coleman-street, London. A COMPETITOR.

MINERAL RIGHTS IN THE FOREST OF DEAN.

Sir,—I perceive a report in last week's *Mining Journal* of certain proceedings at the Gaveller's Office, on Nov. 22, relative to a gale said to have been granted on that day, wherein it was stated that the Messrs. T. and W. Brain (who objected to the same) were "under a misconception that the Drybrook and Penswells Iron Mines, which belong to them, would occupy the greater portion, if not the whole, of the proposed grants."

Barring the "misconception," it would be difficult to say too much in praise of the report itself; it supplies the public with the information that there is such a place as the "Forest of Dean." That there are "Free Miners" in it, who are said to possess "irascible tempers," and to require "qualified agents" to represent them—in this instance "Messrs. Hoskold, Huxham, and Hewlett," who produced "a series of seven sections and two plans." That a *deep* gale was granted, with a prospect of a "Chancery Suit" at the bottom of it. FORESTER.

THE COURT OF STANNARIES—No. I.

Sir,—In the reign of King John, who was Earl of Cornwall, the property of the tin miners was in a very precarious and unsettled condition; the tin raised was engrossed and managed by the Jews to the great regret—as Dr. Borlase, the historian, states—of the barons and their vassals, and the king, in consequence, granted the tinners a charter, which may be said to be the first stone of the Stannaries Court. In subsequent reigns various modifications and alterations took place. For instance, in the time of Richard, King of the Romans and Earl of Cornwall, the Cornish mines were immensely rich, but became in time comparatively neglected for want of proper encouragement to labour, and security to enjoy and dispose of the produce of that labour. An address was presented to Edmund Earl of Cornwall, and a charter obtained from him, confirmed by his own seal, with more explicit grants, and the privileges of keeping a court of judicature, holding plea of all actions—life, limb, and land excepted; of managing and deciding all stannary causes, and of receiving as their own due and property the toll tin of 1-15th of all raised. At this time, also, the rights of *bounding* or dividing tin grounds were first appointed, or more regularly adjusted than before.

In the 33d of Edward I. this charter of Edmund seems to have been confirmed, and further enlarged by Acts of Parliament in the reigns of Richard II., Edward IV., and Edward VI., until, in the 2d of Elizabeth, the society of tinners was divided into four parts or districts, and one general *warden* appointed to "do justice in law and equity," with an appeal from his decision to the Duke of Cornwall or to the Crown. This warden, as at present, appointed a vice-warden, to determine all stannaries disputes every month. Now, Sir, the rights of bounding have long been abolished, so have many privileges of the tinners, but the Stannaries Court remains, as it seems to many, for the mere protection of merchants, the profit of lawyers, and the annoyance of out-adventurers.

It is not long since that the manager of some of the largest mines in Cornwall stated, at a public meeting, that the Stannaries Court ought to be abolished, for it was, he said, if I remember rightly, the curse of mining. And I am sure this will be echoed by numbers of persons *out* of the county, but not for the reasons assigned by a correspondent in last week's Journal. A few people may have been injured by the system of transferring shares to irresponsible parties; and in my former letter I said plainly that anyone so transferring shares to get rid of his own liability, and to cast it upon others, deserved to be well trounced even by the Stannaries Court. But the real evil is not here, and in the case referred to in my letter the party so transferring was neither a broker nor a dealer, but one of the public. Indeed, I think as a rule we shall find that brokers and dealers are only too anxious to get the names of *good* transferrees; and that in nineteen cases out of twenty, where shares have been transferred to servants and minors to avoid liability, it has been done by speculators and the outside public, and that the dealers have been the parties deceived; and they have probably enough to answer for, without the attack made upon them by Mr. Absalom Bennett. I have, indeed, some recollection that a short time ago I read of an action brought against a Cornishman to recover a large arrear of calls on shares which it was proved he had transferred to his own tenant to escape liability. And further, in condemning the Stannaries Court I do not, in consequence, condemn the "Cost-book System," which, when *properly conducted*, I have always maintained, in your Journal, is the best and most simple mode for conducting mines upon; but it is open to great abuses, which could never be perpetrated but for the Court of Stannaries. How this happens, and how these abuses have occurred, I shall endeavour to show you in a future communication. ARGUS.

COST-BOOK SYSTEM—STANNARY COURT, &c.

Sir,—There is much truth in the assertion of your correspondent in last week's Journal as to the perfection of the Cost-book System when honestly dealt with, and the inexpensiveness of the said system, and I believe, from many years' experience, that as applied to mining it is far to be preferred to the Limited Liability Acts, although the latter may deserve the approval of outside speculators, and be more in the way of investors of a cautious turn of mind, but anyone thoroughly acquainted with all its ramifications would soon perceive the many advantages attached to its being carried out in a straightforward and honourable manner. The principle of this system is—work your mine in a miner like manner, and pay your debts. The chief abuse is entirely owing to the neglect of the latter precaution, which soon leads to placing you in the power of your creditors, a power I would fain advise all connected with mining to avoid. Once in their hands but little mercy is shown, and sooner or later you find yourselves in the meshes of the Stannary Court. Who ever heard of a merchant asking for reference of a mining company? No one I fancy, for as long as a stick of machinery is on the mine, or a substantial shareholder to be shot at, credit is unlimited, well knowing that in the event of their not being able to obtain payment for supplies the Court will step in and pummel the unfortunate shareholder for his alliance, perhaps unwittingly, with a worthless adventure. There are, doubtless, many merchants of undoubted respectability who would almost sacrifice their debt rather than resort to proceedings in this Court, while there are others—the more wealthy the more grasping—who will not only have their pound of flesh, but an extra slice in the way of interest before they will relinquish their hold upon the unfortunate adventurer.

A shareholder in an abandoned mine in the Stannary Court is to be compared to a dead mouse on an ant hill, inasmuch as his bones will be clean picked before he is done with. It would be interesting to know, if it could be ascertained, what amount of the large sum of money sent into Cornwall for the purpose of developing the many mines is subscribed by the merchants in that county. Some time ago I selected one office in London which was sending into the county some 40,000*l.* per annum, out of which I was prepared to say that not 700*l.* was subscribed by the merchants and suppliers to the several mines. Many are under the impression that the proceedings of the Court are most costly—it is not the case I believe—but where the expenses and bills of costs are run up is by the many lawyers employed by one and the other, and I think, most unnecessarily. For instance, I will take a case which recently occurred. A merchant, or firm, applied to their solicitors to file a petition to wind-up a mine. These gentlemen had to employ other solicitors as agents, before the application to the Court could be made. The business of the company being conducted in London, the company had to employ their solicitors, who had to communicate with their agent in Cornwall. So actually here are four sets of solicitors engaged, independent of the solicitors to the Registrar, before the order is made on the petition to wind-up, and the mine has to bear all the costs. It is, therefore, not fair to credit the Stannary Court with these expenses as being the charges of the Court, but to the many legal gentlemen who have a finger in the pie. It is well known, although an anomaly, that the Registrar of this Court is also liquidator and taxing master, and, I believe, in each capacity, has his legal advisers.

Another great drawback to this Court is the facilities for filing a petition to wind-up a mine by a creditor. You have only to incur a debt, and any selfish or unscrupulous merchant has merely to make an affidavit and the petition is on the file in no time; and, although the company may satisfy his debt and costs, any other creditor can make use of the same petition; and as birds of a feather all fly

together there is then but little hope for the poor shareholder, as he has no alternative but to surrender to the sudden and unexpected demands made upon him, and submit to a winding-up order. I have always looked upon the Court as a court of relief for Cornish merchants, and I but too well know the little favour shown to an unlucky adventurer. A case in which I was unfortunately interested is, perhaps, well worth mentioning. Some 12 or 14 years ago, when much younger in experience, I was foolish enough to sign a cost-book for—well, never mind how many shares—in consideration of certain never-to-be-fulfilled promises, one of which was that any and all calls on the said shares were to be paid for me. The mine went to work, and continued working for two or three years. The largest shareholder died, his representatives could or would not hold his interest, other shareholders relinquished, and became bankrupt, &c., and at last the mine stopped. Creditors became impatient, and the result was a petition and an order to wind-up. At the time this order was made I believe the debts of the mine were about 1100*l.* or 1200*l.*, and a heavy sum due for arrears of calls. The machinery and plant were sold by order of the Court, and realised, if I remember rightly, about sufficient to meet the debts of the mine, independent of the arrears of calls. Some time after I received a notice that I was indebted to the company for unpaid calls, and, of course, demanding payment. I stated at once how and under what circumstances I became the holder of the shares, and denied my liability; however, my name was placed on the list of contributors, and I heard no more of the matter for some three or four years, when one day I was served with a peremptory order. In reply to this I had to employ a solicitor, who prepared an affidavit setting forth that I had not the means to pay the demand made upon me. Here I thought the matter had ended, when after the lapse of another three or four years I had polite intimation that unless I then and there paid the calls previously applied for, together with another call that had been made, of which I had not the slightest notice, judgment and execution would follow. To this I answered that I could not comply, and I was advised to make an affidavit and offer a compromise. My affidavit was prepared and sent in, in the usual way, offering so much in the pound (a fair offer) in full discharge, &c., when I was informed that it would be necessary to get some one to make an affidavit to prove that my affidavit was true; however, this absurnity was not enforced. After several communications between my and the liquidators' solicitors (incurring two heavy bills for costs) my offer was accepted by the liquidators, but a few days after came a notice that the Registrar (one and the same person as the liquidator) could not confirm the order, which was approved by the Vice-Warden, as the payment could not be accepted only in discharge of any further call that might be required; so it is just possible that another demand may be made upon me, but for what purpose I should be left in entire ignorance. Can anyone wonder at Cornish mining being in such bad odour when such a state of things exists?

Many years since I remember reading in the Journal a letter stating, I think, that an enormous sum must have accumulated in the hands of the Stannary Court, many thousands of pounds, and asking what became of the interest upon this large accumulation. It is possible a reply might have been given, but I have no recollection of having seen, nor do I think that any answer was given. It has often occurred to me that any Member of Parliament might with good grace make a motion for a return of the money received by the Stannary Court, and how it has been applied during the last seven or fourteen years or more. I fancy an astounding confession would be made, and the public duly enlightened. It would, probably, be useless requesting the Member of any borough or town in Cornwall or Devon to move in the matter, for doubtless most, if not all, are in some way or other connected with the mining interest, and it might probably be more than their seat was worth to raise the question. At the same time it ought be be made public, as in all my experience I never recollect hearing anyone say that as a shareholder in a defunct mine wound-up by the Court referred to they had ever received a dividend, but on one occasion a gentleman told me that he had some years back received, I think it was, a cheque for 5*d.* I do not mean to say that dividends have not been declared, at the same time I have never heard that such was the case. I have no wish in any way to malign the Court, but it is their peculiar way of doing business that so disgusts the mining community, and the long and unnecessary delay in bringing the affairs of a company to a close—in other words, where anyone persevering and indefatigable individual would wind-up the affairs of a company in at least a couple of years the Court invariably takes I cannot say how many; in fact, one never knows when a company is finally wound-up, as no accounts are published, and information so limited and vague that applicants come away sadder, but not wiser, men. To give his sable majesty his due, I must say there are isolated cases in which the Court will protect shareholders, but how few resort to it unless under the most urgent circumstances it is needless to say, as much in consequence of the long and unnecessary delay as the fear of heavy and extravagant costs.

THE MAN OF KENT.

LEGITIMATE AND MARKET MINES.

Sir,—Your correspondent "Viator" complains that certain mines are quoted and noticed more in the Journal than others; and while he refers to some which are making large returns, and another paying dividends, as "delusive undertakings, and quoted at fabulous prices," he gives us a selection of what *he* considers the mines of the period; some of which I fancy your readers may never have heard of before, and one of them which he refers to as "gradually approaching its old dividend state," I find in another column of your paper has just made a heavy call upon its shareholders.

If by "fabulous" quotations "Viator" refers—and it is evident that he does so—to those given in your City Article, he ought to know, and your readers ought also to know, that the writer of that article is not responsible for a single quoted price. Every quotation is sent in from the open market, on a printed form, which is regularly filed. This list is filled in by the dealers in the market, but not by *anyone* connected with the writer of your article; and it contains mines which have to *stand the test of market operations, and of market opinions.*

In reference to the statement that some mines are noticed more than others, this is solely the fault of secretaries and pursers, inasmuch as for many years past the writer has made repeated applications to them, in London, Cornwall, and elsewhere, for notices and reports of their mines, to make the article as full and useful as possible. If some of these officials will *not* send information, and others do, the shareholders of the former ought not to complain of your correspondent, who is always anxious to get all the information he can, and writes nothing but what is founded on official reports.

And I cannot avoid adding here that the public have not so much reason to complain of mines which have to stand the test of openly expressed public opinion, and of their supporters and opponents in an open market, as of those which are only sold privately, and at prices that have never yet stood the test of an open market.

CITY.

AN AMERICAN'S VIEW OF THE TIN MINES OF CORNWALL.

Sir,—Fortunate, happy Cornwall! She has a Don Quixote, who as it seems, stands ready to do for her furious battle against all comers. It doth appear that this valiant *cacoethes scribendi* Knight, on reading "An American's View of the Tin Mines of Cornwall," was straightway seized with a paroxysm, and, becoming battle wroth, cried out, "What, shall an American dare say his thoughts in England about English things, and have them printed in an English Journal? Shall a foreigner criticise in his own way Cornish mining and notions, call things by right names (abominable to the English ear), and yet go clear of abuse for his audacity? No, by thunder! I will to the rescue! I'll say, this display of Mr. Baker is an embodiment of consummate ignorance, an ostentatious display of words pretending to knowledge, and, because of its general untruthfulness and one-sidedness, it will not, I think, fail to be pronounced and stigmatised as an unmitigated libel."

Should the original article be re-read by any gentleman, it will be observed that no Cornish interest is assailed—no corporation injured, and no wrong intended generally or specially either in tone, language, or conclusions. Abroad the Cornish mines are celebrated. I expected to find the evidence of that celebrity not in legends, but in snug, economical, well-housed machinery, processes adapted to the work in accordance with the last achievement of modern progress, the *morale* unexceptionable, and the general system and discipline in the best condition. I found in all this directly the opposite, and was informed that what I saw represented the whole. In English law the truth is a libel (more shame to English jurisprudence), but could I have foreseen that there was a dolt in England who would draw the law upon me, and charge an "unmitigated libel" because I told the truth as I saw it concerning the situation in Cornwall, I might have preferred to lie like any Englishman in my report. Here I cry *peccavi*. Perhaps the best proof of what I said in the original paper (all of which I here reiterate) is to be found in the fact that all I did was done for and endorsed by those for whom this Don Quixote undertakes to do battle as a volunteer. I saw, wrote the article, and corrected the proof; those interested in Cornish mines read the manuscript, approved, and sent it to press. To say more than this in answer to Knappy's insinuations might be deemed "cruelty to animals," and render me liable for the breach of another English law.

The original article was intended to express the writer's astonishment at the sight of machinery outdoors in an inclement location, exposing the labourer to needless suffering, and consequent demoralisation; at the condition of the shafts, none said to be timbered; and at the very rude and certainly expensive and wasteful system of washing the ore mass. I took my own way of telling all this, and here seems to be a cause of great offence. But the Don disproves my statements by the boy's system of logic, "You're another." He tells me to go home and look at the faults, inapt machinery, and waste in Colorado, Nevada, and elsewhere. Here, again, I cry *peccavi*. The waste, mismanagement, bad machinery, and losses are indeed prodigious in those mining localities, but I really did not know that the Cornish system was first-rate simply because much in my own country should be condemned as very bad and improper.

Quite a laboured attempt is made to excite the ire of the Boscaswell owners at my expense, and the *reductio ad absurdum* logic is tried on. He slips up on my figures precisely as he has in other respects, and makes a value per ton of 14*s.* 3½*d.* against mine of 26*s.*, in order to prove my absurdity, and also that I do disparage the Boscaswell Downs Mines. Now, when I undertake to teach arithmetic I hope to have gentlemen for pupils. It will suffice for the present to say that my calculation is correct, and the data given plain. If the Boscaswell Downs yields more per ton, or is worth less or more per ton than 26*s.*, Mr. Williams must have misinformed me of the percentage of metal contained in the tinstuff saved from an average ton as it comes to grass.

I am fully aware that it is an ungracious task to criticise a system, habits, or notions, and might be only stupid if there were neither the ability nor the intention to suggest improvements. Part of this objection was thus parried by alluding to one improvement which already had replaced an antiquated Cornish pet,—by mentioning also the intended introduction of other improvements which will quite as fully demonstrate the absurdities of present Cornish practices as does the Robey engine in that one particular. As to other improvements to replace the concatenation-of-fortuitous-circumstances now employed in tin washing, some suggestions may be made at the proper time to the proper persons. One article does not contain all I know, which is different from Robert Knapp, since his one article contains much more than he knows.

G. W. BAKER.

AN AMERICAN'S VIEW OF THE TIN MINES OF CORNWALL.

Sir,—Mr. G. W. Baker, of Colorado, has shown his command of language, incompetency to understand a difficult and complicated branch of our industry, and great ability in trying to prove that people must be all fools who are doing anything he cannot understand. I knew a boy learning algebra who when he came to a difficult problem said the writer of the book must be a fool. Mr. Baker may have had, probably, a few months' experience of mining in Colorado, but his mind is evidently not of that calibre which would render a first visit to any new mining district of very much value to him. I would advise his visiting the tin mines of Cornwall a second time before displaying his self-conceit in such an attempt at the enlightenment of others. He is evidently very much like the boy who was studying algebra, and proves most clearly that tin mining is, to him at least, a sealed book.

BRIAREOUS.

Redruth, Dec. 5.

THE PROGRESSIVE MINES OF CORNWALL.

Sir,—It has occurred to me that for some most unaccountable reason a great and very general depression has fallen on all *new* mining enterprises. It is most difficult to find any plausible, much less any just reason for this, but yet I would venture to guess at what would seem to be one of the probable causes, and that is that brokers and sharedealers have almost uniformly been advising their clients to go into old established dividend mines which are, more than any others, affected by the fluctuations in the money market and the rises and falls in the prices of metals. I do not charge them with any unfair design in this course of action, but one cannot but see that the high-priced concerns are those which pay them best to deal in, and though they do not hold out the same chance of large profits for their clients, at the same time they avoid the greater chance of loss. Another reason is that persons have been unduly alarmed at the reports of the produce of tin in Australia and elsewhere; another undoubtedly, and a most just one, too, is that the late by far too great mining excitement led persons to bring out, and others to take shares in, concerns which never ought to have been touched. Doubtless, among the many mines that have recently been started in Cornwall are many that it would have been much better, for many and very cogent reasons, to have left unworked, but this does not in the least interfere with the fact that many very good and most legitimate mining enterprises have been launched which speculators and investors would do well to examine, and, probably, to take an interest in. On looking over the Share-List in last week's Journal, I was much struck with the fact that many mines of the greatest promise are altogether omitted, while others are quoted at much below their real worth. From which I draw the following conclusion—that such transitory depression as the present one affords an opportunity of laying hold of genuine concerns at prices much below their real value, and that instead of everybody rushing into the market and selling everything that will sell at all, and offering other things for which there is absolutely no market, surely persons of capital ought to be found with sufficient pluck to avail themselves of others' weaknesses and fearfulness. The display of a little energy on the part of those interested in Cornish Mining would soon render things firm and prosperous. Any person making a judicious selection of progressing mines and buying a few shares at the present prices cannot fail to make money fast, either by the inevitable rise in the price of shares, or from the profits of the mines themselves.

In order to illustrate what I mean, and also as a guide to persons who may not be in a position to obtain independent information and advice, I have carefully selected a dozen mines with which, either personally or by reputation, I am well acquainted. In the following list the number of shares represents 1 per cent. of those into which the concern is divided; the price of the shares is, I believe, about the current market price:—

Shares.	Mine.	District.	Price per share.	Cost.
10	Bosworgey	St. Erth	£5 10 0	£55 0 0
10	Leeds and St. Aubyn	Germoe	4 0 0	40 0 0
20	New Hendra	ditto	1 0 0	20 0 0
50	New Rosewarne	Gwinear	5 10 0	275 10 0
12	New West Rosewarne	ditto	7 0 0	84 0 0
10	North Rosewarne	ditto	2 15 0	27 10 0
30	Parbola	ditto	0 10 0	15 0 0
10	Polrose	Breage	2 0 0	20 0 0
50	South Great Work	St. Erth	1 5 0	62 10 0
20	West Wheal Lucy	Lelant	1 15 0	35 0 0
10	Wheal Osborne	Crowan	5 10 0	55 0 0
30	Wheal Peevor	Redruth	2 0 0	60 0 0
262				£749 10 0

There are many other rising mines, such as Balmynhear, in Wendron, East Seton, in Camborne, Levant, in St. Just, The Lovell, in Wendron, that may perhaps fairly claim a comparison with some of the above. I do not know the price at which shares in The Lovell can be obtained, but, if at a reasonable figure, perhaps it would be best to let them stand in the place of South Great Work or Wheal Peevor, although I must own that both these mines stand a great chance of a good rise, which may take place any day. With regard to the mines in the above list, I would advise your readers to make strict enquiries for themselves, but at the same time I would venture to give a brief outline of the character and prospects of each one.

Bosworgey is to the west of the celebrated Lewis Tin Mines. Tin is found to exist in all the numerous lodes, considerable quantities have been raised and sold from the backs, and several pares of tributers are doing well, both for themselves and the shareholders, at the present time, and the agents state that there cannot be a doubt about the mine doing well; 30*s.* or 40*s.* further call will probably be quite enough to put up stamps and floors, and to make this a large and profitable concern.

Leeds and St. Aubyn has been working for many years, and it still shallow and a cheap mine to work. It has just commenced to leave profits, and the produce is likely to increase considerably. If 5½ to 6 tons of tin per month can be sent to market, a profit of 25 per cent. would be realised on present price of shares.

New Hendra.—Comparatively little has been done here, but the chances are very good, and the ground can all be thoroughly explored by means of a deep adit for a very small outlay. It is certainly more than an ordinarily good speculation.

New Rosewarne.—This is the only mine that at the present moment has any great pretensions that I have included in the list, but the fact is that its shares are at the present moment selling at such a ridiculously low figure (not more than a third of their real value) that I could not but include it as one of the most, if not indeed the most, promising of all our progressive mines.

New West Rosewarne.—Comparatively little has been done here yet, but it has the New Rosewarne lode, which has been found of great value wherever seen in this sett. The prospects here are so good that the shares are well worth their present price.

North Rosewarne.—This is a genuine speculation; it will either be a blank or a great prize, and the chance of its turning out the latter is so great that I should have no hesitation in advising anyone to take an interest, especially as the shares are at so low a price.

Parbola.—This is a mine which paid costs on a production of from 4 to 5 tons of tin per month when it was only about 4*l.* per ton; it is now dry to the 20 fm. level, and there will be no difficulty in making the same return as formerly, which at the present price would leave a very handsome profit. If this little mine does not present the same chance of proving to be as an immense prize as the next one I shall notice, at the same time its almost absolute certainty of soon becoming profitable makes it a good investment.

Polrose.—This mine is in a wonderfully good district, lying west of Great Work, east of the Old Polladras, and parallel to and only a short distance to the north of the Great Wheal Vor Mines. It was only started in April last, and already considerable quantities of tin have been broken from a lode of the greatest promise. It is evidently one of the champion lodes of this justly-celebrated district. Next to New Rosewarne, I know of no mine that is so likely soon to prove itself to be a great concern.

South Great Work.—It appears that here all that is wanted is proper machinery, and power for returning the stuff they break; I am informed that there will soon be 16 heads at work. The main lode is large and promising, but the workings as yet are shallow.

West Wheal Lucy.—Comparatively little has done here yet, but that little has a most promising appearance. The district is so good that this must be worthy of investors' attention. It may go to a high price at the shortest notice.

Wheal Osborne.—This mine, after many ups and downs, has ceased to make calls, and will probably soon be removed to the Dividend List. A safe investment.

Wheal Peevor.—This mine is wonderfully well spoken of in the district, and will, no doubt, follow its rich neighbour, Treleigh Wood. There is every chance of its paying large profits, but will depend rather more on the price of tin than many of the other mines I have mentioned.

I am convinced that an investment in the above mines will prove highly remunerative, with which idea I have gone into most of them myself, and in order to give a fillip to Cornish Mining; and, more, to benefit themselves, I hope many others will follow my example.—*Camborne, Dec. 4.*

OBSERVER.

THE CARDIGANSHIRE MINES, AND THEIR ROYALTIES.

Sir,—Observing a letter in last week's *Mining Journal*, signed "One Interested," calling attention to a letter of mine which appeared in the *Aberystwith Observer* on Nov. 23, I beg to forward you a copy of a letter which I have this day sent to the Editor of the same paper for insertion on Saturday next, and shall feel obliged, if you think the communication worthy of space in your valuable Journal, if you will allow it to appear in this week's impression.

"I feel it a matter of the greatest importance that the subject I addressed you on should, for the sake of the landowners, the capitalists, and the community at large, be more thoroughly sifted, in order that we may have some reliable information to guide us as to the results, in foreshadowing a reduction of royalty to 1-20th of the gross receipts of the sales of lead and silver ores, instead of being now from 1-10th to 1-14th; and in the first place I am only too proud to bear witness to the liberality of some gentlemen of standing in this county, as having consented to these terms, amongst whom I may mention Mr. J. M. Davies, of Antaron, near Aberystwith, and I hear also that the Crown, in the land adjoining Mr. Davies's, have consented to accept 1-18th royalty, and if this is so, it is a most important step in the right direction, and I can also bear testimony that since my letter appeared I have made application for a reduction of royalty in two mines in which I am largely interested, on the ground of one of the greatest landed proprietors in this county, and my applications have been attended with comparative success, and I have no doubt that when matters shall be fully and fairly laid before all parties that we shall not find the landed proprietors of Cardiganshire unwilling to listen to reasonable terms. Having said this much I will endeavour to lay before you the yield of silver and lead from the Cardiganshire mines up to 1851, as supposed by my late brother Matthew, which were as follows:—

	Silver.	Lead.
Llanfair and Rhydtalog	£ 62,500	£ 25,000
Esgair Mwyn	—	600,000
Cwmystwith	—	500,000
Grogwinion	—	250,000
Logylas	—	200,000
Frongoch	—	100,000
The Rheidol mines, consisting of Esgair Lle, Nant-y-Cria, Bodcol, Estymtean, Penrhew, Rhiwrhiggus, Erwtomme, Gwilth Coch, Gellirherin, & Tyllwyd	—	500,000
Goginan, Bwich Cwm Erfin (now Bwich Consols), Pwllrheneid, Cae Nant, Pen Craig-du, Cwm Erfin, Cwm Symlog, Darren, Cwm Sebon, and Bronfloyd	1,625,000	1,500,000
Esgair her and Talybont district, comprising Allt-y-Crib, Bryn United, Ergllodd and Penybank, &c....	—	1,000,000
Court Grange	30,000	36,000
		£4,711,000
Add silver		1,717,500
Total produce		£6,428,500

The calculation for lead ore was made at 10*l.* per ton; as Capt. Francis says he estimates the yield of Nant-y-Mwyn, near Llandovery, at 100,000 tons of lead ore, or a total of 1,000,000*l.* sterling. He also proceeds: 'It must be observed that 20 years of systematic mining would have been sufficient to have produced all the results we have glanced at, and that very little capital in comparison to the returns has ever been invested in these mines, and that little under the most disadvantageous circumstances to the progress of legitimate mining.'

Now, supposing in taking the gross amount of ores returned from the mines enumerated—6,428,500, and divide them by 20, for the 20 years named, it would give us an annual produce to be raised from them of 321,425*l.*, and as they have been very little deepened since 1851, we may consider, through the amount they are capable of returning at present, with increased machinery and proper draining and dressing apparatus, and without these appliances are forthwith forthcoming the mines above named cannot, as a whole, be wrought successfully, and the sooner that all parties are brought to look these facts in the face the better, for capitalists must be prepared to lay out a considerable sum of money to complete the necessary work, which should be fairly and liberally met by the landowners, on the following grounds.

1. Instead of being able to work cheaply and with greater dispatch over adit levels, engine-shafts will have to be sunk, and sufficient sections of ground laid open annually for the proper development of each of the mines, and as this section of ground will have to be deepened each year successively, the labourer will be unable to perform as great a quantity of work, having an increased distance to ascend and to descend from his work.—2. A greater expense for pumping and timbering, and increased power for drawing stuff.—3. A much increased expenditure in the sinking of engine shafts, and laying open the ground for the convenience of working, and in many cases these will have to be attended with the erection of steam-engines to accomplish the work. I do not mean it to be understood that 321,425*l.* is the amount that the mines of Cardiganshire are capable of returning annually. For Capt. Francis says: 'I should say a capital of 150,000*l.* well invested in the now dormant mines of Cardiganshire would realise an income of 150,000*l.* per annum, or cent. per cent. upon the capital.'

In order to get such an amount of profits as stated, a return of 450,000*l.* would have to be added to the foregoing sum, and the county produce from 700,000*l.* to 800,000*l.* worth of silver and lead each year, instead of 1-7th of this amount as at present. Let us, therefore, hope that by the landowners meeting the capitalists on fair and reasonable terms, and the latter laying out the moneys sufficient for the effectual working of the mines, that Cardiganshire may be saved the fate she has before witnessed on more than one occasion—a cessation of mining for a century together."

Goginan, Aberystwith, Dec. 3. ABSALOM FRANCIS, M.E.

NEW GREAT CONSOLS—No. II.

Sir.—This sett was granted by H.R.H. the Prince of Wales, and extends over an area of about 250 or 300 acres. The land is called Deerpark. A sett, adjoining this, granted in the same estate, and managed by Capt. Bucknell, is called by that name. The lode in Deerpark strikes the boundary of New Great Consols obliquely, consequently passes into it, and now, where the works are, underlies towards it. Lodes on boundaries of setts cause some trouble to the agents, because the correct division of the ores is so difficult and unsatisfactory, as was the case between South Frances and West Basset, and Tincroft and South Crofty. Deerpark lode, judging from reports in the *Mining Journal*, is likely to be very productive

New Great Consols is about a mile in length from the east to the western extremity, and that is the direction, nearly, of the lodes now so valuable for tin ore. The quantity of arsenic produced exceeds all that I ever heard of from one mine. The present quantity will be enhanced in proportion to the extension of the levels through the lodes. It appears that there about are seven tons of arsenic to a ton of black tin; if, therefore, the returns of black tin at any future time shall amount to 100 tons per month, the quantity of arsenic will be about 700 tons per month, yielding about 2100*l.*—an unprecedented yield for one mine.

The mine is situate on the northern and southern sides of a valley which extends up to Whiteford House, the late residence of Sir William Call, Bart., and is in the parish of Stoke Climsland, Cornwall.

The number of persons employed is about 300, and that number will be increased with the increasing magnitude of the operations underground. The village of Lucket within the sett is small, and the cottages around are not numerous, so that the miners are badly off, I apprehend, as regards lodgings. To remedy this evil the company intend, I hear, to erect about 30 cottages on a portion of Deerpark; about 70 acres taken in lease from the Prince of Wales; every cottage is to have a garden attached. The existence of a mine in any locality is the cause of great business, and the innkeeper in Lucket finds the benefit of it; but the late innkeeper there found a premature grave. One or two of the agents "abstainers," look upon the inn as a curse to the place. I perceived that the miners there are not so intelligent as those at Camborne and Redruth, and that as regards drink they are "sensual." The temperance element is sadly wanting. A Christian missionary is needed among them, for they are, apparently, very deficient of religious knowledge; but when they work, they *do* work. Miners are too fond of holidays; they, therefore, waste more time than any other class of labourers in England—that I know. However, in this mine the men get good wages from hard work, and from

…ot only; for the manager gives a fair price between the employer and employed. …f that price, from long and extensive experience, he is a competent judge; and he …very careful to do that which is just "between man and man." Captain R. Pryor …y be ranked amongst the successful mine agents. A mine agent who happened …have only one good mine out of half-a-score used to be considered fortunate, but …ptain Pryor has several good ones.

…e calcination of the tin ore a great quantity of arsenical vapour is evolved, …hich, descending from the low stack to the surface of the land, has caused, of …urse, considerable injury, if not absolute destruction, to a large area of arable land. …e farmer says it is 100 acres, but his neighbours say it is not so much. He will …im compensation from his lord, in a reduction of the rent. Whether the Royal …d will charge it wholly or partially to his good tenants—the shareholders in this …ine—remain to be seen by-and-bye.—*Truro, Dec. 4.* R. SYMONS.

REVIEW OF MINING FOR THE YEAR 1872—No. I.

SIR,—Some mines, or rather gambling concoctions, having had their fling, are at present pretty accurately appreciated; but these inflated "schemes" have, as heretofore, seriously injured legitimate mining, as well as infusing wide-spread distrust and serious loss to many confiding investors.

East Basset at the opening of the year stood at 14*l.* per share, 45*l.* called up; the price is now 32½*l.* per 512th share, with 57*l.* subscribed; calls, therefore, of 6144*l.* have been made, in the face of which the market value has increased 11,472*l.* during the year. This mine has frequently sold far above its value. West Tolgus selling to 9000*l.* to 10,000*l.*, with North Pool at 10,000*l.* to 12,000*l.*, are far more worthy the attention of capitalists. East Grenville has called up 6000*l.* during the year, just 500*l.* a month loss, and the market value of the concern—18,000*l.* to 20,000*l.* in January last—has declined to 9000*l.*, 50 per cent. above the gross calls, and just 25,300*l.* discount on the capital called up. This is a fair sample of a speculative market fancy mine. New Rosewarne from 16,000*l.* has advanced to 30,000*l.* in the face of calls of 8750*l.* over the year; Trehigh Wood from 13,000*l.* has rapidly rose to 150,000*l.*, with 8750*l.* called up. These are "other two" market selling "balls;" the first of questionable promise, and the latter an ordinary speculation, in a good district, with fair chances of moderate gains if economically worked and practically handled.

West Basset shares, 14*l.* in January, are now 7*l.* to 8*l.*, or just one-half the price, calls of 5000*l.* being taken into account. The market value is just fourteen times what it stood at two years ago, yet we know not of any important discovery. We can understand South Carn Brea advancing from 1*l.* to 4*l.* per 6000th share, and also why South Condurrow advanced to 12*l.* per share before the water submerged the workings last spring, and that the price of 8*l.* per 6122th share is still justified. There are dividends in prospective, as well as fair chances of greatly enhanced returns. Just fancy South Condurrow selling for 48,000*l.* to 50,000*l.*! when compared with Aberdaunant, 120,000*l.*, or East Llangynog, 200,000*l.* North Roskear bids fair to become again a profitable mine—over 100,000*l.* dividends were declared upon a capital of 1400*l.* only, but for the past 20 years the workings have been attended with losses. The calls now amount to 67*l.* per 675th share, and the market value stands at 25*l.* It is highly probable that the price will run high during the coming summer. South Crofty is a fair speculation at 20*l.* to 25*l.* per share; the price is now 60*l.* to 65*l.* Formerly this mine formed a part of East Crofty, and was moderately productive on Penhallack lode, but, on the whole, it cannot be pronounced a prize of more than ordinary character. The market was rampant in the spring of this year, and the price of shares ran up to 110*l.* The workings over the past 20 years have been attended with about 30,000*l.* losses over and above the entire products of tin and copper. West Jewell, selling at 2*l.* to 2*l.* 10*s.* per share, is worthy attention. The prospects are healthy, and the future suggestive of advancing quotations.

Wheal Buller and Wheal Seton, formerly very profitable copper mines, form almost exceptions to the rule. Dolcoath to Carn Brea, a run of fully three miles, is exceedingly productive of tin under the deposits of copper; and North Roskear, adjoining Seton, bids fair to follow suit, whilst tin in paying quantities is found in the mines surrounding Buller. The shares in both are good to hold at ruling prices. East Lovell, from a dividend, has become a calling mine, yet the future is fraught with promise. St. Agnes Consols, 3¾ to 4 per share—say, 15,000*l.* for the property, 12,000*l.* called up—is a star in prospective. The mine adjoins Kitty, one of the most productive tin mines over the past forty years, and amongst the dividend mines of the day. The St. Agnes Consols is practically and economically managed, and Capt. Vivian is likely to develope here, as well as at South Condurrow, a dividend property. There are peculiar features associated with this enterprise, and several pioneer points of promise will be achieved during the coming year. East Balleswidden, a tin mine in the Far West, is showing evidences of unusual productiveness, while the management is energetic and practical. The stamping machinery is erected and at work, so that the yield can now be brought to market. The capital subscribed is ample for all purposes, and as the workings become extended there is no doubt in the opinions of mining authorities but that large and profitable deposits of tin will be laid open. The share list has become largely extended, and embrace capitalists resident throughout the whole kingdom, while the direction is sound and efficient. The shares are 10,000 in number, 20s. paid, and the market quotation 32s. 6d. to 35s. The district of St. Just has for centuries been celebrated for its yield of tin, and at present several mines exhibit most encouraging prospects.

Van Consols shares are in great request, and the management is vested in practical hands. This mine appears to advantage amongst the progressive properties in Wales. The unqualified success of Van speaks volumes in favour of its neighbour, and the general support accorded the "office" attests the esteem in which the secretary is held. It is of first moment to be a lucky man, and success usually follows energy, industry, and *esprit*; and in this instance the "executive" is to be congratulated in possessing three such mines as Van Consols, Pensthruthal Consols, and West Jewell. The prize of the year appears to be gained by Messrs. Bartlett and Chapman in the "Lovell," a mine standing to the east of Trumpet Consols. It must be accorded that the resuscitation of this property is a very Phœnix, as a few months ago the price of shares ranged at 10*s.* only, since which profits of 1113*l.* have been divided, and during the coming year there is strong promise of that amount being quadrupled. The lode is valued at 50*l.* up to 100*l.* and above per fm. The discovery is made at a very shallow depth, and the expense of working is comparatively light. The shares are 2784 in number, and marketable at 13*l.* each. Terras has also entered the dividend list, and two dividends of 1*s.* 6*d.* each have been declared, upon which the price has advanced to 5*l.* per 25,000ths shares—say, 125,000*l.* for the property. The only mines in Cornwall at the present moment exceeding this in money value are the Carn Brea, 140,000*l.*; Dolcoath, 280,000*l.*; and Tincroft, 330,000*l.*; while we know of only six others in the United Kingdom—Great Laxey, Minera, Van, Tankerville, Roman Gravels, and the Mining Company of Ireland—which, together sell for 1,610,000*l.* with a capital paid up of 430,000*l.*, against which dividends have been disbursed amounting to 962,600*l.*

London, Dec. 4. R. TREDINNICK,
Consulting Mining Engineer.

A NEW MINING DISTRICT.

SIR,—In my rambles through the parish of Constantine, which adjoins Wendron on the south-east, I dropped on a little mine, which, on enquiry, I found to be called Wheal Mary, the chief operations being confined to driving an adit level and sinking a shaft from surface on a large tin lode, which is producing rich work. Nothing seems to be done on its course to the east nor west of the present point of operations. They have the advantage of a good stream of water for all purposes required in carrying on extensive operations, and, I should say, they are going over a rich deposit of tin.

Wending my way up the little rivulet, which empties itself into the Gweek or Elford river, for about a mile, or thereabouts, I came to that celebrated mine, The Lovell, where I found one of the best courses of tin that has been discovered for years, the lode altogether being 15 ft. wide, and at the depth of only 12 fms. from surface. A level has been driven over a bunch of tin for 30 fms., from which driving 50 tons of tin has been sold. A new engine-shaft is being sunk, now down 15 fms. from surface, carrying about 9 ft of the lode, which part is worth 200*l.* per fathom. Suffice it to say, in the face of an extra expenditure, consequent on the erection of necessary pumping machinery, this little (but to be great) mine is paying good dividends, which must greatly increase as new levels are opened out.

To the east, and on course of same productive lode, operations have been commenced in New East Wheal Lovell, where they have discovered the same lode, and a shaft is being sunk from surface on its course, it proving to be 8 ft. wide, containing tin throughout, although only yet a few feet deep, and is considered by the most eminent mining authorities to be equal in promise, for the depth yet attained, to its rich neighbour, The Lovell. Other lodes further north are also being opened on.

This new district has not been equalled in importance since the discoveries made in the celebrated Chiverton district. MINER.

EAST TERRAS MINE.

SIR,—The shareholders are respectfully informed that a meeting will be officially called as early as it can be done *legally*. A meeting at which no business could be legally transacted would be useless waste of time. The Articles of Association must be observed.—*Truro, Dec. 5.* R. SYMONS.

THE RHINE MINING COMPANY.

SIR,—The Rhine Mining Company (Limited) was formed in 1870, to work three concessions, formerly known as Schmelzer, and so called in consequence of the large copper smelting works formerly in the valley. The property is bounded on the north by the celebrated St. Josephsberg Copper Mine; all the north and south, being the rich lodes of this mine, pass through the grant for more than half a mile, and on the south and east, and by and adjoining Marienberg rich copper mine. The most productive shoots of ore in St. Josephsberg Mine are dipping south, and are within a few fathoms of the northern boundary of this, the Schmelzer property. The new engine-shaft in St. Josephsberg has been sunk about 90 fms., and an excellent 60-inch cylinder Cornish pumping-engine erected on it, quite capable of working the mine to the depth of 200 fms., and will most assuredly drain the lodes in Schmelzer.

The St. Josephsberg deep adit, which intersects the lodes about 50 fms. under surface, passes through the Schmelzer concession, and has intersected a copper lode, on which, strange to say, not 1 fathom has been driven. In addition to the north and south copper lodes two large and well-defined east and west lead lodes, which have been very productive in the shallow level, and will *form a junction in depth*, have been worked by a former party of poor miners, with a horse-whim only, to the depth of about 11 fathoms. The present company have erected a new and very good pumping and drawing-engine of 30-horse power, and sunk the shaft to about 25 fms., and extended their levels a very short distance on one of the lodes (the junction, which is about 30 to 35 fms. from surface, has not yet been reached); this lode is large and well defined, and producing lead and blende of excellent quality, and in considerable quantity. The company must now elect to pay the balance of the purchase money (amount unknown to me) to Messrs. Bleibtreu, of Obercapel, by Bonn, in Germany (the proprietors of the property), or abandon the mine, leaving the steam-engine and plant, and the mine, in good condition. Messrs. Bleibtreu desire to lease or sell this large and valuable property, situate between the two most productive copper mines in Germany (St. Josephberg and Marienberg), and subject to a royalty or dues of 1-50th only, reasonable terms. The property is held by them in perpetuity, direct from the Emperor of Germany. This affords a rare opportunity for an investment, with most marvellous chances of splendid results. To render St. Josephsberg Mining Company complete, Schmelzer should be incorporated with it, and an additional capital raised to work the united properties, a matter of easy accomplishment at this moment. BYSTANDER.

Dec. 5.

ROSSA GRANDE GOLD MINING COMPANY.

SIR,—I saw by the last report that the costs for September amounted to 827*l.*; the same report states that first-class ore was coming out from the Bahu, but instead of being stamped to meet the cost it was put to "pile."

Subsequently, under date Oct. 16, the manager writes—"To avoid holding out too elevated a view of our prospects in the absence of stamping to prove with accuracy the value of the lodes," &c.

Surely some explanation is needed here, since the shareholders have not forgotten that they have had to pay for the erection of two stamping-mills. The only conclusion deducible is that the manager has been instructed not to stamp yet. If such be the case, who could have given such an order? Looking at the responsibilities he assumed at other mines, is it unreasonable to suppose that our managing director exercised a little authority on his own account at this mine also during his recent trip to Brazil?

The Bahu—although according to former reports of great notoriety for the richness of its ore—was neglected up to within the last two years, because force could not be obtained to work it, but now that it has been opened, and ore is being extracted, for some unexplained reason no stamping is going on.

Dec. 2. A SHAREHOLDER FROM THE COMMENCEMENT.

THE GREAT WESTERN SILVER MINING COMPANY.

SIR,—The annual meeting of this company is appointed to be held on Tuesday. As I shall not be able to attend will you permit me, through the Journal, to draw the attention of my co-shareholders in this "unfortunate" (a stronger term would be more appropriate) company to the statement of accounts? The outlay in Nevada altogether amounts to 923*l.* 15*s.* 9*d.* The outlay in London, directors' fees, secretary, law, &c., amounts to 1393*l.* 14*s.* 6*d.*, or upwards of 50 per cent. more than that paid in working the mine. Verily it looks as though the company was formed for the special behoof of those engaged in its management. Then, again, as it is proposed to hand this company over to another one, it would be well for someone to enquire at the meeting who are the directors of the East Sheboygan? What progress has that mine made, and what are its prospects? Would it not be better to forego all that we have already paid, compel shareholders in arrears to pay up, and wind-up the unfortunate company at once? NEVADA.

THE NEW QUEBRADA LAND AND MINING COMPANY.

SIR,—Most reluctantly do I ask you to insert this letter in next week's Journal, feeling that too much has already been written respecting the above property. I most emphatically endorse all that has been said about the gross mismanagement of the board of directors, but, Sir, I as emphatically protest against the attempt on the part of some of your correspondents to depreciate in the eyes of the public this most valuable estate. I have been connected with the company from the commencement—now, alas! many years ago—I have watched with the greatest interest all its vicissitudes—to-day upon the eve of extinction, to-morrow with its shares at par, or nearly so; all this I have seen, and feel now as I have ever felt, that "the general character of the mines is that of an unlimited quantity of ore." This being a fact, and knowing, too, that "there is a silver lining to every cloud," I am far from taking a desponding view of the future of this great undertaking, and feel that if we can secure Mr. Hemming (to whom I have never spoken) as the leading spirit of our next board, we shall soon find that "the good time has really come."—*Southampton, Dec. 4.* AN ORIGINAL SHAREHOLDER.

[For remainder of Original Correspondence see to-day's Journal.]

TIN.—Messrs. Van Houten and Ebeling (Rotterdam, Nov. 30) write:—Tin has been in limited demand, and freely offered this month, and the quotations show a decided decline in prices. Banca changed hands at 92 fls. in the beginning of the month, but with more pressure to sell the price receded to 86 fls., closing at 87 fls. In contracts for delivery, ex the Spring sale 1873, some business is reported at 86 fls. to 84½ fls. Billiton was selling at 87½ fls., both on the spot and to arrive in the early part of the month, but has since declined to 84 fls., 85 fls. On Monday, Dec. 9, a public sale, comprising 5000 peculs Billiton, will take place at Batavia. The position of Banca tin in Holland on Nov. 30, according to the official returns published by the Dutch Trading Company, was:—

	1872.	1871.	1870.
Import in November ..... Slabs	21,706	5,990	8,901
Total eleven months	121,012	113,912	175,202
Deliveries in November	6,060	39,017	17,212
Total eleven months	94,327	183,008	131,876
Stock second-hand	39,052	51,900	87,839
Total stock	93,483	79,832	166,974
Stock of Billiton	11,073	1,756	1,600
Import in November	100	6,700	100
Delivered and shipped in November	6,544	8,000	4,800
Banca afloat ..... Peculs	20,400	8,000	10,100
Billiton	8,647	1,183	9,213
Quotation { Banca	87 fl.	88¼ fl.	73¼ fl.
Nov. 30.. } Billiton	83	87½	72½

These returns of Banca, compared with those for 1871, exhibit—An increase of the import for November of 491 tons, an increase of the import for the eleven months of 222 tons, a decrease of the deliveries for November of 1030 tons, a decrease of the deliveries for the eleven months of 2771 tons, an increase of the stock second-hand of 401 tons, an increase of the unsold stock of 828 tons, an inerease of the total stock of 427 tons, a decline of the quotation of Banca of 2*l.* 10*s.* per ton.

The Government returns for the month of September are as follows:—

EXPORT OF TIN FROM HOLLAND.

	September.			Nine months.		
	1872.	1871.	1870.	1872.	1871.	1870.
Germany ..... Tons	153	131	204	1940	2186	1534
England	84	26	28	221	943	1132
Belgium	59	74	12	888	721	1420
France	15	26	2	129	501	121
Hamburg	44	20	3	263	190	75
United States	—	—	35	—	3	66
Other countries	51	49	—	219	377	182
Total	406	326	284	3660	4843	4550

COPPER—(J. Pitcairn-Campbell and Co., Liverpool).—Arrivals during the fortnight of West Coast, S.A., produce:—Tongoy, from Valparaiso, with 60 tons bars; Ellen Lamb, from Valparaiso, with 50 tons bars; Glamorgan, from Caldera, with 836 tons regulus; Yosemite, from Valparaiso, with 30 tons bars; Claribel, from Valparaiso, with 30 tons bars; Tarapaca, from Valparaiso, with 1150 tons bars; Prince Arthur, from Valparaiso, with 150 tons bars; Arequipa, from Valparaiso, with 50 tons bars; Edinburgh Castle, from Valparaiso, with 320 tons bars. At Swansea—Claudine, from Totoralillo, with 675 tons regulus; Carmelita, from Tocopilla, with 720 tons ores and 135 tons regulus; Caldera, from Lota, with 697 tons bars. Stocks of copper (Chilian and Bolivan) in first and second hands likely to be available are estimated at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	19	350	15,144	1070	—
Swansea	16	3173	5,461	85	—
Total	35	3523	20,605	1155	—

Representing about 23,400 tons fine copper, against 12,800 tons November 30, 1871; 21,700 tons Nov. 30, 1870; 16,500 tons Nov. 30, 1869.

MINERAL RESOURCES OF INDIA.—A report on the coal of the Kistna district, in the Madras Presidency, has led to the important declaration on the part of the Government of India that in all cases some royalty should be charged on minerals or quarries, to preserve the Government lien, for the purpose, apart even from the financial value, of avoiding permanent engagements, and to prevent the establishment of monopolies. The Governor-General hopes, however, that mineral enterprise, at present all but dormant, may be made to contribute largely to the financial resources of the empire. Some months ago I drew the attention of your readers to the same fact, and held that the royalty ought in all cases to be preserved by Government. It will not check enterprise in the slightest degree, while it will preserve to the Government both the power to regulate mining speculations, and also a sure source of revenue, for the mineral resources of India will certainly be opened up before long if the empire remains at peace. It cannot be otherwise, when the supply is so undoubted and the want so rapidly growing. *Times'* Calcutta Correspondent.

Meetings of Public Companies.

RICHMOND CONSOLIDATED MINING COMPANY.

The general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Tuesday,—Mr. JOHN ELLIOTT in the chair.

Mr. T. W. HALL (the secretary) read the notice convening the meeting, and the minutes of the preceding one, the report and accounts, being taken as read.

The CHAIRMAN said that the report was moderately long, but it would have required a volume to have gone into all the details, so that he could probably supplement many of the statements by further explanations. At the date of the last meeting they had a telegram to the effect that the owners of the Tip Top Mine disputed their boundary. In that country they were always liable to difficulties as to boundary, because the boundary was regulated by the lode, and they had the right to shift the surface boundary as the lode varied. In this case some San Franciscans had got hold of several claims around them, and threatened to oust them altogether. The fact was that a claim had been registered in the local court, but the proceedings had not been carried on to the county court, and the representative of the company had made the necessary search through all the courts downward to the county court, but did not go beyond. The local claim was two weeks before theirs, but as it had not been proceeded with it could not have been maintained against them. However to avoid litigation they agreed to purchase the Tip Top claim, and had no doubt it would be a valuable acquisition for the company. The claim which had arisen now had nothing whatever to do with their title; they had now no difficulties as to title. They had to purchase the Tip Top Mine, 15,000*l.* instead of 10,000*l.*, owing to the snowstorm having afforded the previous owners of it the opportunity of claiming that the company had not fulfilled the conditions within the time stipulated. When the furnace was put up the manager stated that in the first month he had overcome all difficulties, and the directors were perfectly satisfied with the result. The returns, however, did not keep up, and the manager told them that the good result at first obtained was owing to the skill of the smelter, who unfortunately fell ill, and could not be replaced. No one else could be found competent to deal with so large a furnace, and the consequence was that they had to cut down the size of the furnace to adapt it to the men they could get. The return fell from $20,000 to $8000 per week, until a few weeks previously, when they received advices that it had again been $20,700 and $19,000 in the following week, so that they were again justified in thinking that the prospects held out in the prospectus would be realised. It was gratifying, however, to find that they were able to realise a profit on poor ore. They were at first working on $60 ore; then it fell to $40, and they still realised a profit; it subsequently got up again to $44, $46, $55, and by the last report they were again working on $60 ore; the shafts had always shown the ore to increase in richness as in depth. The $45 ore upon which they had worked was chiefly taken out of the construction adit, which was a very favourable feature, as in many mines the construction adits and similar works, had all to be done, although they yielded no paying ore. The whole board were decidedly of opinion that the mine was fuller of promise than when it was brought before the public. They would have to deal with a property whose richness had created, perhaps, the very difficulties which now surrounded them. The difficulty, which was only a trifling one, was that the surface survey gave them three parallel lodes, and the surface corresponding. The lode upon which they were now working instead of running, he would say, north and south (he did not know that that was the direction, but used it by way of example) turned off and run nearly east and west; this was a matter which no human being could foresee. From what their manager wrote it appeared their workings were approaching the square location adjoining their property. They knew of this square location, but like all others of the same class it is held subject to the right of adjoining proprietors to follow the lodes when they entered it. He believed that they were 200 feet from surface where they entered, and were told that there was no ore in the square location until they were 200 feet down. From the telegram they had received from Mr. Corrigan he supposed that the owners of the Look Out location had applied for experts to be sent in to ascertain whether the company were working within the Look Out boundary; he assumed that the experts had reported against them, and supposed that the sheriff had taken possession. Under these circumstances they must either fight the claim or purchase. Prof. Fisher is of opinion that there is no doubt that the company have law on their side, but the manager estimated that the cost of carrying on the suit would be $100,000. He would remind them in estimating the value of the property that in May the reserves were estimated at 100,000, whilst, when the prospectus was sent out, they were only estimated at 20,000 tons. He had especially requested Mr. Corrigan, before he left England, to give his attention to the valuation when he reached the mine, and he was glad to be able to tell them that Mr. Corrigan valued the reserves at $2,000,000, or 400,000*l.*, and in one of the local papers it had been stated that the ore under the Look Out was the finest in the State. He then read a series of letters which had been received. The average of the ore was $52 per ton, and as to their expenses they had had a rise on charcoal, and they had also had to pay a large percentage for interest on bullion in transit. There was no doubt that the rich vein upon which they were working had its apex in the Richmond ground, and, therefore, they had the right to follow it into the Look Out. The Eureka Company's grant gave them the right to minerals met with from surface, but certainly not to the Richmond lode. From the first he had proposed that they should buy the Look Out, and if they had done so some time since it could have been obtained for a mere nominal sum. As to the direction of their vein, he believed it was much like forked lightning. The great question for the meeting to consider was how they were to deal with the difficulty. It had been mentioned in the report that there would be 9000*l.* available for distribution to-day; but as the sheriff had laid his hands upon the ore on the dumps it would deprive them for the moment of resources, and if the shareholders took the money, and left them with none in hand, it would tie the hands of the directors, and would probably prevent the declaration of any dividend for a long time. He had told them that the reserves of ore were estimated by Mr. Corrigan to be worth $2,000,000, and the hearing of the action on the claim was put down for Jan. 13. The ore in the Tip Top Mine was undeveloped, because the manager was anxious to lose no time in raising as much as possible from the Richmond vein, in order to provide himself with the means for meeting emergencies. With regard to the telegram which they had received the previous evening it was very unintelligible, although they had received two corrections from Newfoundland since it arrived. They had, therefore, telegraphed to Mr. Corrigan to repeat, but his answer had not been yet received. About the main facts, however, intended to be conveyed there could be little doubt—"The furnace and bullion seized, $300,000 bond required, and unless 5000*l.* sterling be sent immediately the thing will be lost." This he understood to mean "unless they paid so much down to the sheriff, and gave a bond for the other." He would be glad to receive any suggestion which the shareholders might have to make.

Mr. BRIDGWATER enquired whether it was proposed to adjourn the meeting in order to afford the shareholders an opportunity of considering the matter?

The CHAIRMAN said that could not be, as it was absolutely necessary that they should take action in the matter at once.

A SHAREHOLER assumed that if the other party obtained the verdict the whole of their mine would be gone.—The CHAIRMAN said not at all; they would have the Tip Top Mine and the Virginia.

Mr. BRIDGWATER enquired whether there was no means of procuring time in America, such as by process of estoppel for example?

The CHAIRMAN said that Prof. Fisher had seen the owners of the square location, and the matter had been deferred from time to time, until, he presumed, it could be put off no longer. The greatest disadvantage they had been put to arose from the stopping of their resources. There was $20,000 worth of ore, the proceeds of which they were for the time being deprived of.

Mr. APPLEGARTH guessed he was pretty well acquained with the law out there, and knew that no company could attach their furnace and fuel for working beyond their boundary. The attachment of such things must be for non-payment of the men, and it must be from the workmen.

Mr. CAMP, another American, added that they could not attach the ore that was out of the ground unless they could show that it was taken from the disputed ground; the owners of the Look Out could not attach the charcoal furnaces at all.

The CHAIRMAN said that the only answer he could give was that they had done so; whether they had done so legally, of course, remained to be proved, and he would remind them that one of the United States Mining Commissioners, he did not recollect his name, had expressly stated in his official report that attachments on mines can be much too easily effected.

Mr. BRIDGWATER would like to know whether it was the same claimants here as in the former dispute, and whether Prof. Keyes was still superintendent of the Eureka? Was the certificate given by Prof. Keyes of no value to the company?

The CHAIRMAN explained that at the time Prof. Keyes gave his report no one could have foretold which way the lode would run. The question had not arisen. It was the result of the four months' working that had brought out the source of dispute.—A SHAREHOLDER enquired whether they proposed instead of dividing the 9000*l.* that the meeting should authorise the directors to send it out?

The CHAIRMAN said, not all. They had the 2000 shares, which would give them much additional cash in hand.

Mr. HAGGARD contended that if they had no money here they could not have realised 14,000*l.* profit.

The CHAIRMAN explained that much of the working capital must always be locked up in bullion in transit.—Mr. CAMP understood that since the accounts were made up they had taken out bullion worth $144,000, and that this bullion was in pig lead on its way to San Francisco. That was really their assets.—The CHAIRMAN said they had 2000 shares as well.

Mr. BRIDGWATER thought an important question was the amount of working expenses.—Mr. CAMP assumed that the June, July, and August produce was placed against not only the three months' cost, but also against the six months of unproductive work.

The CHAIRMAN said that that was so.—Mr. HAGGARD maintained that on Nov. 30 they could not have realised the profit stated, unless they had more money in London.

Mr. BRIDGWATER enquired whether the bullion could not be sent to this country, instead of having an agent in San Francisco, about whom they necessarily knew but very little?

The CHAIRMAN said they had a proposition before them bearing upon that question. The question depended upon whether they would provide capital to put up refining works, so as to reduce the cost of sending the bullion by road. A railway to Eureka would save this company 25,000*l.* a year, and the Eureka Company 70,000*l.*; and it might be a question hereafter for the shareholders in these companies to consider the advisability of supporting such a project. There were two lines which had received the necessary official sanction, one of which would pass within twelve miles of the mines, and the other would come right into Eureka. Either would, of course, be of great advantage to the company. As to avoiding the San Francisco agency, they had a communication from Mr. C. B. Ruskin, of the Omaha Smelting Works, containing an offer for taking the ore at the mines at a rate which

would be a saving of 10 per cent. to the company as compared with the price they were now paying.

The report and accounts were then unanimously carried. Messrs. Elliott and Bower were re-elected directors, and Mr. Broom was re-elected auditor.

Mr. Hopkins remarked that there was a vacant seat at the board for which he would like to propose Mr. B. Broughton, of Bradford. Mr. Broughton and his friends were holders of many thousands of shares, and as he was every week in London he would have no difficulty in attending the meetings.

Mr. Wallance seconded the appointment, which was unanimously agreed to, Mr. Broughton acknowledging the compliment.

The Chairman believed the views and suggestions of the several shareholders would be met by the resolution which he had prepared, as follows:—

"That so much of the available means of the company as shall be found necessary be applied to meet the exigency of the proceedings depending against the company at the suit of the Eureka Consolidated Mining Company. That the directors be, and they are hereby, empowered as and when and for such amount as they deem reasonable to declare and make payable a dividend; and to avoid the expense and trouble of convening meetings of the shareholders for such purpose the directors be further empowered to declare and make payable future dividends for such proportionate periods of the current and following years as may be found by them desirable."

The resolution having been duly seconded was put to the meeting and carried unanimously.

Upon the proposition of Mr. Bridgwater, seconded by Mr. Applegarth, a cordial vote of thanks was given to the Chairman and directors, and thanks were voted to Prof. Fisher and to the manager at the mine. The meeting then separated.

SILVER PLUME MINING COMPANY.

A general meeting of shareholders was held at the offices, 21, Great Winchester-street, on Nov. 30,—Mr. Wadham in the chair.

Mr. Orchard (the secretary) read the notice convening the meeting.

The report of the directors (which was taken as read) appeared in last week's Journal.

The Chairman said the directors, in their report, had endeavoured to place before the shareholders, without concealment or exaggeration, the exact position of the mine; and also to state the circumstances which had led to the non-realisation of the prospects held out about this time last year. He thought the shareholders would, upon consideration, agree that, with the exception of the building of the mill, that had arisen from causes entirely beyond the control of the directors. As to the character of the ore in the upper levels it was very much as represented by Prof. Richardson in his report, upon which the mine was purchased; and the price realised showed that these ores were very valuable. The length and severity of the winter had, of course, seriously interrupted their mining operations. The erection of the crushing-mill, he was quite willing to admit, was an error of judgment on the part of the directors; but it was so strongly urged upon them by the manager that he obtained their permission by telegram, remarking the season might pass away, and that they might find themselves in the position of not being able to dress their ore. There was no doubt the building of the mill was premature, but as the mine became developed in depth they might be glad the mill was there. The serious obstacles were those so fully described in the report, although it was satisfactory to be able to state that information had since been received that the active measures taken against the encroachers had been perfectly successful, although the case would have to be brought into Court to obtain the decision of the Judge; that would be done as soon as the Court was sitting, and the company would then take possession of the disputed tunnels, now known as the Hopewell Mine, which would form the fifth and sixth levels of the Silver Plume; from these they hoped to get the supplies of galena ore much more rapidly than had yet been obtained. According to all reports, they were fully justified in believing the mine would prove very valuable as developed in depth, although a certain amount of time must necessarily elapse before sufficient ore could be returned to pay off the liabilities upon it and place the mine in a condition to pay dividends. The accounts showed that one-half of the working capital had been expended, and the other half locked up in the construction of the mill, while there was a debit upon the mine of nearly 700*l*. It was true they might present the balance-sheet with a more pleasant appearance by spreading the legal, London, and other expenses over a series of years, and, taking as an asset, the store on the mine, which cost a large amount of money; but the directors thought it better to lay before the shareholders the naked truth. Mr. Orchard, who is out there managing, held out expectations that he would be able to raise sufficient ore to pay the working expenses, and gradually extinguish the liability upon the mine. Instructions had been sent out to him to stop all fresh developments, and only continue such operations as were absolutely necessary to prove their rights against those encroaching. It was satisfactory to find that from the third and fourth levels, rich sulphurets and rich galena were being extracted, the presence of galena in the lower level being considered a very encouraging augury for the future of the mine, especially when it was described as being of precisely the same character as that found in the neighbouring Pelican Mine, which was supposed to be working upon the same lode as the Silver Plume, and reported to have sold ore to the value of $250,000 during the past season. Mr. Orchard gave it as his opinion that the Silver Plume in depth will prove another Pelican. Almost every mining company brought out lately had been provided with too small working capital; but he believed the calculation of the directors of the Silver Plume under this head would have been correct if they had not locked up so large an amount in the construction of the mill, and he believed, even now, they would be able to get through their present difficulties without raising any further capital. By the Articles of Association, the shareholders will be called together in January, when they will know whether the hopes entertained by Mr. Orchard have been realised or not, or whether it would be necessary to raise any further working capital. He then moved that the report and balance-sheet be received and adopted.——Mr. J. Carr seconded the proposition.

Mr. Williamson, enquired whether Mr. Gray had left the mine, and whether he was in the company's pay; whether the different parcels of ore, each parcel exceeds in richness the preceding, were the fair produce of the mine—in other words, had the "eyes" of the mine been picked out? He also should like some further information as to the value of galena as compared with sulphuret ore.

The Chairman, in reply, stated that Mr. Gray had left the mine with the avowed intention of being present at this meeting, but he had not arrived, and the company had had no information from him since he left. Mr. Gray never was in the pay of the company; he had undertaken the management of the mine, being considered a most honest and valuable man to take such a position, the agreement being that his expenses should be repaid him. His (the Chairman's) own opinion was that Mr. Gray had mismanaged the property, although he believed there was no reason whatever to say anything against his character. As to the ore received, as far as the directors had any information upon the subject—and he thought they had pretty good information now—the ore had not been in any way picked, but was sent home exactly as it was taken out of the mine, and what had been taken out hitherto was a sulphuret of a very high character. Sulphuret ore was much more valuable, bulk for bulk, than galena, but the reason galena was more valuable in depth was because it was found in greater and more compact bodies.

Mr. Williamson asked if there was any kind of collusion between Messrs. Snider and Gray, or whether the best had been done to expel the interlopers?

The Chairman said the directors had no reason to suppose there was any collusion; indeed, if Mr. Gray had shown any bias it was in protecting the interests of the company. There was no reason for any suspicion of the sort against either of the parties mentioned.

Mr. Ramage, in reply to a question from Mr. Williamson, explained that there was no law admitting the right of anyone to tunnel under a company's property, but if parties who said it was not their property chose to tunnel under it; the company was then in the position of being obliged to prove it was their property, but these parties, he considered, had done the company very good service, by proving its property to a much greater depth than the present operations; and if these interlopers would go yet further down the mountain, and drive more tunnels, it would still be advantageous to the company. In fact, he would suggest that one or two men should be constantly employed in testing the lowest limits of the property; by this means they would be able eventually to make their own chimneys, and get their breathing ground. These men had no intention of taking any portion of the company's property; they contended it was not the company's property until it was proved to the contrary. These things were not the fault of the law, but the want of judgment. Two men could trace and prove the extent of the mine for a small cost.

The Chairman said that Mr. Ramage's kind explanation of the mining law was very satisfactory.

Mr. Ramage, in reply to a question, stated that at the end of the 1500 feet the company ceased to own any property.

A Shareholder said the company's property extended for 1500 ft. laterally on the vein, but as deep as the vein existed, and it was supposed that a true fissure vein had no limit in depth.

The motion adopting the report and balance sheet was received and adopted.

Mr. J. Field was re-elected director.

Mr. J. Field having acknowledged this renewed mark of confidence, expressed the great disappointment the directors felt at being unable to submit a more satisfactory statement, and no one was more disappointed than himself. He had never been connected with any company in which he had taken so great an interest or expended so much time as upon this. The main character of the mine had proved to be what it was represented at the commencement, and he believed it to be one of the richest in Colorado if it had been properly worked, and they had not met with unexpected delays, and had they ample capital, which they would have had if those difficulties had not arisen, he believed, very large dividends would have been paid before now.——Mr. Wilson was re-elected auditor.

Mr. Williamson proposed a vote of thanks to the Chairman for the satisfactory explanations he had afforded, and also to the directors. It was clear the mine was not at fault, but the management.

Mr. Porter seconded the proposition, which was put and carried unanimously.

The Chairman, in acknowledgment, said the directors would continue to do the best for the interest of the shareholders, and he hoped the next time they met a much better account would be presented.——The meeting then separated.

SOUTH LISBURNE SILVER-LEAD MINING COMPANY.

A general meeting of shareholders was held at the offices, Bartholomew House, on Tuesday,—Mr. H. W. Lindow in the chair.

Mr. H. Wilson (the secretary) read the notice convening the meeting. The report was read, as follows:—

Nov. 12.—Since the last report the lode in the 45, going west of shaft, has not looked so well, being in a soft channel of ground, but to-day we are pleased to note a change for the better, the foot wall being more upright, with a small branch of blende on the same. The stopes in back of this level continue to look very well. No. 1 stope is in a lode producing 1¼ ton of blende per fathom. No. 2 stope will yield of the same mineral from 20 to 25 cwts. per fathom. The lode in the stope in back of the 34 has become more productive in the western end of the same, its present value for blende being about 16 cwts. per fathom. No material change in the lode in the stope over the back of the 27, which will yield blende at the rate of from 15 to 18 cwts. per fathom. Our dressing operations are proceeding satisfactorily.—Mark Whitford, Frederick Williams.

Mr. W. N. Rudge seconded the proposition.

The Chairman, in reply to questions, stated that they were not realising for their blende nearly so good a price as at the commencement of the company, otherwise they would be realising a considerable profit, probably 150*l*. per month. There was now about 250*l*. worth of blende on the mine. The general impression was that upon further sinking lead would be found, and inasmuch as their operations were upon the Esgair-Mwyn lode, which had made such large profits in the neighbouring mine, that was a point of considerable importance, the more especially as in that mine blende was found above the lead.

The motion accepting the report and balance-sheet was received and adopted.

Mr. T. Gundry was re-elected director, and Mr. F. W. Smart auditor.

A vote of thanks was passed to the Chairman, which terminated the proceedings.

GREAT FRON FOWNOG CONSOLIDATED LEAD MINING COMPANY.

A general meeting of shareholders was held at the Clarendon Rooms, Liverpool, on Nov. 29,—Mr. David Davies in the chair.

The reports of the directors, engineer, and agent, and the statement of accounts, duly audited, were submitted and adopted.

The directors have to report, for the information of the shareholders, that since the last ordinary general meeting, on Nov. 28, 1871, the works have been steadily carried on, and every exertion has been used in sinking the new engine-shaft; they, however, regret to state that, owing to the hardness of the ground and other difficulties, Mr. John Fidler, the contractor, has not made the progress they had expected he would have done, and they, therefore, found it necessary to make a fresh contract with him, so as to include all extra work (such as shifting buckets, clacks, &c.), which has been found thus far to work more satisfactorily, and they now trust that the sinking will proceed with much great dispatch.

Mr. W. C. Pagan, engineer, says—"The whole of the pumping arrangements continue to work well, keeping the shaft clear when making about six strokes per minute—the engine being capable of being worked up to 10 strokes per minute. This result is the more satisfactory as the rainfall of the past year has been 50 per cent. in excess of the average."

Capt. Wm. Wasley reports—"During the past twelve months the new engine-shaft has been sunk 21½ yards, making it now 44 yards 2 ft. 6 in. below the day level, or 94 yards 2 ft. 6 in. below the present top of the shaft. The first 1 yard 2 ft. sunk after the date of my last annual report was in chert, which made the total thickness of the bed 10 yards, which was so very hard that it would cut glass like a diamond; had it not been for this bed the shaft would have been many yards deeper by this time. I do not expect we shall meet with such a bed again in sinking to the flat. I have particularly noticed, in the various mines in this district, that wherever the chert bed is thick the flat below is sure to be exceedingly rich, and I feel certain that such will be the case at this mine. After going through the chert we had a bed of sandstone, 3 yards thick; then a bed of hard black ground, 15 yards thick; we then came to a bed of ground, like shale, in which we have sunk 3 yards 2 ft. 6 in. The shaft is now being sunk at the rate of 1½ yard per week, and as we get nearer the flat I expect the ground will get more favourable for sinking, and that greater progress will be made. The old day level has been entirely cleared of stuff from one end to the other, and put in thorough repair, so that I think nothing more will be wanted to be done to it for a long time. In conclusion, I fully believe that by the time of the annual meeting in 1873 we shall have one of the richest mines ever opened in Wales, which induces me still to retain the large number of shares I have in the company."

Messrs. David Davies and William Leyland, the retiring directors, were unanimously re-elected. Messrs. Finney and Son, accountants, were re-elected auditors. A vote of thanks to the Chairman and directors concluded the proceedings.

SOUTH CARADON MINING COMPANY.

At a general meeting of shareholders, held at the mine on Tuesday (Mr. Richard Kittow in the chair), the accounts for three months ending September showed a profit of 1546*l*. 17s. 3d. A dividend of 2048*l*. (4*l*. per share) was declared, and the balance of 3163*l*. 12s. 9d. carried to the credit of next account. The following report was read to the meeting:—

Dec. 3.—It affords us much pleasure to inform you that our mine is still in a very prosperous state, continuing to yield large quantities of rich copper ore; and, notwithstanding the great falling off in the price of copper, we are enabled to pay a 4*l*. dividend. Since our last meeting we have started our man-engine, which works exceedingly well, and is much prized by the underground men. We believe this to be a valuable addition to your property, and will greatly facilitate the future working of the mine.—J. Holman.

WHEAL MARY ANN MINING COMPANY.

At a general meeting of shareholders, held at the mine on Tuesday (Mr. W. G. Nettle in the chair), the accounts for the three months ending September showed a profit of 425*l*. 8s. 10d. A dividend of 204*l*. 16s. (4s. per share) was declared, and the balance of 935*l*. 17s. 4d. carried to credit of next account. The following report was read:—

Dec. 3.—The lode in the 250, north of Clymo's shaft, is 2 ft. wide, worth 6*l*. per fathom; in the same level south the lode is 2½ ft. wide, worth 4*l*. per fathom. In the 240 north the lode is 3 ft. wide, worth 6*l*. per fathom; in the same level south the lode is 3½ ft. wide, worth 14*l*. per fathom. In the 190 north the lode is at present small, producing a little ore. In the 200, driving south of Trelawny's shaft, the lode is 3 ft. wide, yielding saving work, but not sufficient to value. In the 190, driving north of Smith's shaft, the lode is 3½ ft. wide, producing good stones of ore, but the ground is at present very hard for progress. The stopes and pitches continue to yield their usual quantity of ore. We sold on Nov. 21 three parcels of lead ore—No. 1, computed 64 tons, to Messrs. Sheldon, Bush, and P.S. Company, at 24*l*. 3s. per ton; No. 2, computed 23 tons, to The Treffry Estate, at 15*l*. 15s. 6d. per ton; No. 3, computed 52 tons, to Stolberg Smelting Company, at 14*l*. 18s. 6d. per ton. You will perceive by the abstract of accounts, furnished by the purser, that although we have made our usual returns, yet, in consequence of the very high price of coals, iron, steel, &c., and also charging the remaining 250*l*. owing on the purchase of Trelawny Mine materials, we cannot recommend the paying of more than 4s. per share dividend.—J. Harris, J. Stevens, J. Skeat.

CARNELLOE MINING COMPANY.

At a general meeting of shareholders, held on Nov. 27, at the Red Lion Hotel, Truro (Mr. W. G. Nettle in the chair), the accounts for three months ending September showed a profit of 56*l*. 12s., and the balance of 41*l*. 17s. 6d. was carried to the credit of next account. A call of 1s. per share was made. The following report was read:—

Nov. 27.—The engine-shaft is sunk 26 fms. below surface on the course of the lode, which in the deepest point is 2½ ft. wide, worth 18*l*. per fm. The 20 west is extended 11 fms.; the lode in the end is worth 10*l*. per fm.; this engine lode is the only one we are working on yet, although there are three other large lodes within a distance of 30 fms. south of shaft, and an equal number north of shaft. We are anxious to prove the mine deeper, and with this object in view have been urging on the sinking on one lode first. The tin sold and credited at this meeting has been raised entirely from the engine lode, and chiefly in sinking the engine-shaft and driving one end. We have a strong opinion the mine will open out profitably productive if we persevere in sinking deeper, and open out on the course of the lodes. All the machinery for pumping, hauling, and stamping is being driven by water power, and is in first-rate working order.—W. Rich, W. Ennor.

WHEAL BULLER MINING COMPANY.

Wheal Buller Mine was at one time the finest and most profitable copper mine in the county of Cornwall, and has in its day paid dividends to its adventurers amounting to no less than 255,000*l*., and that upon an outlay originally of only 1000*l*. But the history of many other mines in a similar position may be repeated in the case of Wheal Buller. In due time copper ceased, and the search for tin has been a work of considerable time, of extraordinary patience, and of great expense. When Wheal Buller failed for copper, so also did the dividends to the adventurers, and for ten long years there has been nothing to record but a series of heavy calls to carry on the unprofitable working of the mine. But this state of affairs is coming to an end; the long search for tin has at length resulted in a discovery which it is believed will ere long prove to be of considerable value; and, if this be so, substantial dividends will speedily take the place of costly demands out of the adventurers' pockets. With Mr. Thomas Pryor as purser, and Capt. Chas. Thomas as managing agent, the adventurers have full faith that their property has been and is being well looked after, and they also have as their lord a gentleman—Mr. Buller, of Downes, near Crediton—who is unusually liberal in his dealings with them. Encouragement of this kind has its beneficial effect on those towards whom it is extended, and the example is one which might with advantage be much more generally followed by other lords in the county.

The four monthly meeting was held at the account-house, on Nov. 28, Mr. Thos. Pryor, the purser, presiding. The accounts showed a debit balance of the sum of 1120*l*. 8s. 9d., and the arrears of call were very insignificant.

The agent's report concluded by stating that the prospects are more cheering than for some time past, especially about Hocking's, inasmuch as the strata have materially changed for the better in the bottom of the mine, and should this continue until they met with Stevens's lode, so as to form a junction with the lode now in Hocking's shaft, of which there appears every probability, good and lasting results may be anticipated, especially taking into consideration the masterly and congenial character of the two lodes. To the junction of these two lodes they wished to call particular attention, inasmuch as they are the champion lodes of the district which gave such immense profits from copper. The success of the copper department largely depends on the early development of the locality of the ground in the new shaft, when they trusted in a short time to be in a position to report discoveries of value.

Mr. Mitchell wished for some information respecting the cross-cut from East Basset, and also how long it would be before they would get into their own property?——Capt Thomas replied that they were not more than 2 fms. off.

The Chairman said they had reason to be very grateful to East Basset for the permission which they had given to take up the cross-cut from their mine. It would be of immense benefit, as the cross cut intersected lodes which they know are on that ground, and besides that it would save a great deal of money in water-charges.

Mr. Mitchell asked when it would be available for the development of their property, and what would be the cost of cutting the lode?——Capt. Thomas said it would be about 30*l*.

The Chairman: This was a very important feature in connection with the mine. This lode is parallel with all the rich lodes of which the agents had made mention. They returned something like 150,000*l*. to Wheal Basset, and 160,000*l*. to East Basset. This new ground had only recently been added to the sett, and it seems that they had only to go on in order to develope it into a valuable and profitable property.

In answer to further questions, Capt. Thomas gave a very encouraging report of the position and prospects of the shallow levels in the eastern part of the mine, and he also stated that it would take about 10 or 12 fms. before the junction was reached at Hocking's. He considered this of more importance than any other feature, inasmuch as during the last three or four weeks the strata had changed for the better. Captain Josiah Thomas, of Dolcoath, had seen it, and he had not only expressed his surprise at the character of the change, but was very sanguine as to the future value of that part of the mine.

Mr. Mitchell: Then, in reality, the long looked-for change from copper to tin is taking place?——Captain Thomas: Yes, that is so. When I came here first the shaft was not worth a penny, and the bottom was pretty much the same, but now the shaft is worth 15*l*. per fathom, and the bottom 20*l*.

On the motion of Mr. Pearce, seconded by Mr. Richard, the report and accounts were passed, and it was unanimously decided, on the motion of Mr. Mitchell, seconded by Mr. Vian, that a call of 2*l*. per share should be made to meet the existing liabilities.

The Chairman expressed a very strong hope that at the next meeting the call would be much less, and that the day was not far distant when, instead of having calls to pay, the adventurers would receive substantial dividends. (Hear, hear.) He further explained that the costs brought up at this meeting were for four months, whereas the returns were only for three months and a week. He thought the adventurers might now look with smiling faces upon their property. For many years they had responded to heavy calls, and that with a readiness which was most praiseworthy; but he hoped, as he believed, that they would very soon see the bright side of the picture, and that Wheal Buller would yet pay dividends as a tin mine as it had already done as a copper mine. The change for the better had been long looked for, and now appeared to have come at last, and the adventurers were about to be rewarded for the patience which they had shown to an extent that was most exemplary. They had a first-class agent in Captain Thomas—they could scarcely have a better one. He had now a fine field before him, and if he succeeded in bringing Wheal Buller to the position to which the adventurers were now looking forward he would not have to go much farther in order to earn for himself the fame which already belonged to his cousin—Capt. Josiah Thomas, of Dolcoath. (Applause.)

Capt. Thomas spoke with the greatest confidence of the future of the mine when the junction, to which he had directed attention in his report, should have been effected.——Capt. Inch spoke with equal confidence, and expressed as his opinion that they would have a good and excellent tin mine in Wheal Buller when all the rest were shut up. (Hear, hear, and laughter.)

The Chairman said that Mr. Buller, of Downes, was a most liberal lord. Although, according to the terms of his lease, he was entitled to 1-15th dues, yet he so appreciated the uphill battle which the adventurers had been so long fighting that on application being made to him he generously reduced the dues to 1-20th. This was an example most worthy of imitation by other lords. (Hear, hear.)

—*Western Daily Mercury.*

General Mining Company for Ireland.—At the half-yearly general meeting, held in Dublin, on Monday (Mr. W. R. Foyle in the chair), the directors reported that the operations at the calamine mine, and the manufacture of zinc oxide, were carried on continuously during the past half-year. The former was unfavourable, owing to the low produce of the ore, and the necessity for extending the workings into new ground. The manufacture of zinc oxide during the half year showed a small profit. The difficulty with regard to the presence of lead still exists, and its removal would, of course, greatly enlarge the market for the oxide. The Hibernian Bank having demanded payment of a large portion of the company's debt, a meeting was held, and a call of 1*l*. per share was made. The 7800 fully paid-up shares in the Shallee Silver-Lead Mining Company were distributed *pro rata* (one Shallee share for each General Mining Company share held) to the General Mining Company shareholders. The Shallee shares was really a bonus for the payment of the 1*l*. call, only those who paid it being entitled to them. Capt. Roberts gave a favourable account of the mine, and the Chairman briefly commented on the report, after which the proceedings terminated with the usual complimentary vote.

Wheal Osborne.—At a meeting of adventurers, held at the mine on Thursday (Mr. W. Page Cardozo in the chair), the accounts showed a debit balance of 229*l*. The actual loss on the quarter was only 119*l*., and that balance, the Chairman said, would certainly have been made up, had it not been for the unforseen weather of the last three or four days. They could very easily have returned a ton and a half more tin had the weather been more favourable. They had all seen the amount of stuff that was on the floors. It was pointed out that their merchants' bills had been decreasing during the last three accounts. Their returns of tin had been increasing at the rate of 5 tons every three months. It was not thought necessary to make a call, as it was believed the returns of tin would continue to increase. The report stated that the engine-shaft is sunk 9 fms. below the 25 fm. level. In the last 6 ft. of sinking the lode has improved. It is now 3 ft. wide, producing saving work for tin, being sunk by nine men at 20*l*. per fm. An improvement is expected in the 25 east, as it is getting under some good tin ground. The lode is 3 ft. wide and worth 15*l*. per fm. This winze is 15 fms. in advance of the 25 east. The 15 fm. level is driven east from Dawe's shaft 35 fms., and is holed to the eastern shaft. This shaft in future will be called Gray's shaft. The last 10 fms. driving has been through a lode 3 ft. wide; worth 20*l*. per fm. They will now stope the back of this level, where the lode is of the same value as the end, and will also sink Gray's shaft below this level with all possible speed. On the whole, the mine is looking very well.

THE CLIFTON SILVER MINING COMPANY.

The general meeting will be held on Friday. The report of the directors states that the mines have been extensively opened and developed, and are proved to contain large bodies of ore, which could be mined, if needed, at a rate exceeding 100 tons per day. The stock of ore taken out during the year exceeds 1000 tons, all of which is now on hand at the mine. The quality of the ore hitherto produced is of a lower grade than was expected, and the manager has consequently been unable to find purchasers for it excepting at prices which he has not thought proper to accept. The result is that there has been a continuous outlay on the one side, without any receipts from ore sold on the other. But it will be satisfactory to the shareholders to learn that the prospects are now greatly changed for the better, by the approaching completion of a railroad to Black Hawk (3 miles distant from the mines), and the progressing, as well as contemplated, increase in the milling establishments in the Territory, through which the demand for ore will be increased, and those of lower grades hitherto unsaleable will probably become objects of competition to the smelters. Mr. Collom's Concentration Works are being constructed at Idaho, distant 3 to 3½ miles from the mines. Mr. Collom has intimated that he will be willing to concentrate the ores at a charge of $2 per ton, up to 30 tons per day. If this quantity can be hauled and treacted daily with moderate regularity, the directors will in a few months be in a position to pay dividends. Mr. Collom expects to commence operations by February 1. The capital consists of 30,000*l*. The mines cost 16,500*l*., preliminary expenses 1494*l*. 14s. 1d., and 12,005*l*. 5s. 8d. remained as the working capital of the company, available for the opening and development of the mines.

[For remainder of Meetings see to-day's Journal.]

WEST ESGAIR LLE MINE (CARDIGANSHIRE)—SPECIAL REPORT.

Van Consols Mine, Dec. 4.—Agreeably with your instructions I have recently made a thorough inspection of this mine, and now beg to hand you the following report thereon:—I found your grant to be three-fourths of a mile and upwards in length on the line of the lodes, which traverse a clay-slate formation, identical to that of the great lead-bearing mines of this county. Within 200 fathoms of the western boundary a commodious engine-shaft has been sunk 27 fms. under the adit level, but the lode has never been developed at this point—in fact, only seen in the 10 fm. level, where it has been driven on some 20 fms. east, which varies in width from 40 to 50 ft., and has a southerly dip of 10 to 150; at this point the lode has yielded from time to time a considerable quantity of superior blende, and small parcels of lead ore. To obtain this the roof of the drivage is stoped some fathoms in height, and for about 25 to 30 ft. in width, which was, and is still, uniformly productive. The present operations are confined to driving east, and stoping the roof as the level is extended, but no boundary wall can be seen in these excavations. I estimate the yield of blende at 1½ to 2 tons per cubic fathom, which should, with suitable machinery for cleansing it, leave a good profit to the shareholders. I was rather astonished to find the shaft had been sunk so deep, and this fine and masterly lode had not been driven through from the bottom of it; however, this is so much done in favour of the present company. The machinery on this part of the mine consists of a water-wheel, which is employed pumping, drawing, crushing, &c., but is not of sufficient power to perform so much work; and the dressing machinery—jiggers, &c., on the old principle—are not expeditious enough to separate the ore in large quantities. Therefore, I think with greater water-power, and the erection of recent improved dressing machinery, it would enable the management to render the mine profitably productive, with still greater success at deeper levels. About 250 fms. east of the above-named shaft the lode has again been intersected at an adit level, by cross-cut driven south 50 fms. in length, and on which a new engine-shaft has been sunk on its course to a depth of 2 fms. under a 10 fm. level, and the sinking is still being continued for a 20 fm. level. The 10 fm. level is driven east on the lode some 6 fms., and west 8 fms.; here it presents all the elements of great success being achieved. The lode is of great width, and consists of oxide of iron, beautiful green carbonate and sulphuret of copper, and excellent stones of lead ore, and other congenial matrix. Consequently, I am fully impressed that a very rich lead lode will be opened out underneath. Large heaps of produce from these very shallow operations are quite sufficient to convince judges in this belief. At this part of the mine new machinery buildings, &c., have been erected, capable of developing the mine to a considerable depth, and making all ores marketable therefrom. Therefore, future expense will be almost wholly devoted to laying the mine open, which I believe will give great satisfaction to the shareholders. The Esgair Lle lode, from which large returns of lead ore have been made, traverse this sett through a flat valley, and which may be intersected by cross-cuts as soon as the last named shaft has been sunk deep enough for that purpose. I may here add that you have sufficient water-power for all purposes required for mining, and other natural facilities are all that can be desired.—James Roach.

Royal School of Mines, Jermyn Street.

LECTURES ON MINERALOGY.

A course of Six Lectures on Mineralogy are being delivered by Mr. W. W. SMYTH, F.R.S., at the Geological Museum, Jermyn-street, of which we shall give a report in the Journal. The first lecture of the series was introductory, and chiefly on the "Geometrical Forms of the Inorganic World."

In the cases upstairs and in the British Museum are some very fine illustrations of the great variety of beautiful figures in which minerals and other inorganic substances are wont to arrange themselves. When the larger proportion of the materials which constitute the inorganic kingdom have been brought into a state of liquidity, either by elevation of temperature or by being made soluble in water, as soon as they begin to return to a solid state they have a tendency to assume certain geometrical forms; these forms are extremely multifarious, and their external figure is connected with a remarkable degree of regularity in the inner structure of those substances, and with other of their properties—optical, &c. It is evident, therefore, that a knowledge of these forms and of their laws may be regarded as an essential part of the basis of mineralogy, and is as essential to a right understanding of that subject as the rules of grammar are to the correct knowledge of a language.

Among the characters of these so-called crystals their regularity of form was noticed thousands of years ago by some of the ancient observers, but from the irregular way in which they examined into things before the true inductive system of Bacon had introduced a systematic observation, no conclusions of any value were obtained by them. They were aware that certain minerals were found in the same hexagonal form, but this does not appear to have led them to generalise on the subject but in museums. It is true that the specimens they contain, and the exceptionally fine arrangements, are the pick of large numbers of comparatively uninteresting specimens, and although there is very great advantage in studying those perfect forms, yet some kinds of crystals are more common and more easily obtainable. In passing over one of the London bridges, or along the Thames Embankment, if we examine the granite there we may frequently see portions as long as a finger, of a very white colour, reflecting the light differently from the remainder of the stone. They are not unfrequently taken for fossils, and are called by the quarrymen "horses' teeth," but they are simply crystals of "orthoclase" felspar, embedded in the other stone. Again, if we take a piece of the common granite from the Channel Islands, Cornwall, Leicestershire, &c., which is so largely used in London for road metal, and examine it, we shall see some crystals of the same form developed on a much smaller scale, and often of a different colour. We shall also see a darker substance taking a distinct and well-defined form; and another small and very thin leaf-like substance, with a strong lustre of a different colour, but which also exhibits a certain definite regular structure. These are all crystals of which granite is made up, and they arranged themselves in solidifying into certain geometrical figures. But in this case the mass of material containing these crystals causes them to abut on one another, and they have, therefore, not had favourable conditions for opening themselves out, so to speak, and fully developing their proper form. These are crystalline masses, such as we cannot take for types of perfect crystals; for these latter we must go to some spots where the crystals have had room to fully develope themselves. These places are small caverns, clefts, and fissures, where the crystals may often be found attached by one side only, while the others have been free to grow.

Take, again, crystalline marble—say, Carrara—and this substance, when broken asunder, is seen to be composed of innumerable little particles, with bright faces, looking very much like a piece of coarse lump sugar, and the cause of this is that when the material is crystallised, the planes of the crystals were more or less interfered with by one another, and the result is a sort of granular aggregate. Here is a large crystal of quartz or rock crystal; it is a prism of six sides, terminating in a six-sided pyramid, and if the angles are measured they will be found to be exactly equal in every crystal of this substance, whether obtained from the Grampians, Mont Blanc, or any other part of the world. In these slabs (porphyries) throughout their mass are disseminated small crystalline grains of quartz, all crystallised after the same manner as above. These stones are extremely hard and brittle, and in working on them many good steel tools are blunted and broken up; they cannot be scratched with a penknife.

Our beautiful gems are all of them cut out of crystallised masses, sometimes rounded: by their brilliancy and transparency we can perceive that they have once formed part of crystals. In the different varieties of the beryl—called by different names, but all known to mineralogists as beryl, which is known as emerald when of a dark-green colour, and as aquamarine when of a pale green—the crystals have a form similar to the lower part of that crystal of quartz—a hexagonal prism. We might, therefore, at first conclude that it has some analogy with the rock crystal, but we notice that instead of terminating in a pyramid, with a sharp point, it has at top and bottom a flat plane place. These gems have a wonderful variety of form; the diamond, ruby, zircon, emerald, sapphire, &c., however, has each its particular form, and you will at once see what an important weapon we possess when armed with a knowledge of these forms. Here we have a model of an octahedron, and you will observe it has eight equilateral trangular faces, and the symmetry of it is the same in every direction. The diamond crystallises mainly in this form, and when it does not the other figures which it assumes are intimately connected geometrically with this form. A diamond crystallised as a six-sided prism has never been seen in the world, and we know from experience that it can never occur. Here is a mammoth specimen of rock crystal, brought by a Cornish miner from a mountain range in the middle of Brazil, who imagined he had found the largest diamond ever seen, and so sacrificed everything else to get this to England, only to find it worth about 2s. 6d. A slight knowledge of crystalline forms would have prevented this folly.

These are two aspects in which to look at crystalline masses and crystals. One is purely educative, such as undoubtedly ought to be carried on for the progress of human knowledge, for which purpose it is necessary to become acquainted with the rules governing these figures, and with the intimate and most highly important relation which these external forms bear to the internal state of the substances. The other is the practical aspect, which if we could only find out the form in which each individual substance crystallises, and could depend on the uniformity and regularity of these shapes, would enable us in a great majority of instances at once and by a mere glance to determine its real character. We might then test its other properties, and make quite sure, and if it were a kind of ore we might say probably what proportion of useful metal might be expected from it. The same laws which apply to natural crystals apply with equal force to the (so to speak) artificial ones produced by the chemist in his laboratory.

There is a common substance, and one of the most useful, called carbonate of lime, and in some varieties calcareous spar. This occurs in a certain definite form—a rhombohedral form—having a point at the summit from which three edges passing down from it are repeated at the opposite extremity. This substance is found, more or less, in about 1200 varieties of form. In the mines in the North of England I make bold to say that you will find in one very small district 20 or 30 different forms; but all these forms are united together by a definite geometrical law, their variations never pass beyond a certain boundary. At first sight the forms appear very different from each other, and it requires a great deal of study to see where the boundary of the group comes, but it is very important to ascertain it. Take, for example, the hexagonal pyramid and the hexagonal prism, as seen in the quartz crystal, and how can we ascertain any connection between the two. It will be necesary to determine the position of the planes, and this may be done in various ways, according to the taste, it may be, of the geometrician. He may refer them to the ceiling and wall of the room, or to certain imaginary lines or axes within the figure, and if he takes one of the latter as upright we can now see that a horizontal section through the middle of both figures exhibits a remarkable degree of regularity when compared with the position of the axes, being in both cases a regular hexagon. Sometimes, as in the crystals of quartz, we have the two forms—pyramid and prism—combined. Take the rhombohedron, and if we place within it three horizontal lines (at equal angles, and intersecting the middle points of the edges of the crystal), and one upright, we can perceive that there is in this, as in the two preceding cases, a certain symmetry of the faces with respect to these axes, although the figure seems slewed until placed in a proper position. This crystal of carbonate of lime, called by the miners "dogtooth spar," bounded by eight scalene triangles, and hence technically called scalenohedron, is seen when placed in a particular position to have axes corresponding with the above forms. There is thus a generalised law, geometrically simple, binding all these different figures together. A great number of the varieties, as in the case of calcareous spar, are produced by the addition of small faces to those principal ones mentioned above.

In this next class (the cubical or octahedral system) we have two axial lines at right angles, and one upright to give the symmetry, and then we have the same binding together as in the others. The simplest form is the octahedron, and if one imagines some small qualification as by raising upon each of these triangular surfaces a low three-sided pyramid, we have produced a figure with 24 sides—the triakisoctahedron—whose relationship with the octahedron is thus readily seen. So with the cube, but the connection in this case is established in a different way; for it is evident the former mode of production would not answer now that we have to reduce an eight-sided figure to one with six sides. We must refer it to the imaginary lines or axes which are intersected by faces of the octahedron, and it is only necessary to imagine a plane placed in each angle of the octahedron parallel to the upright, and to one horizontal axis (the top and bottom faces parallel to the two horizontal axes), to have a cube developed. Many substances occur, crystallised sometimes in the octahedron, sometimes in the cube.

Amongst all these very various forms, of which there are many thousands, the great difficulty at the outset is to make some natural divisions. It was not until the end of the last century that the labours of two Frenchmen cleared up the relationships of these figures among one another. They showed that these multifarious forms were capable of being divided into certain groups. Take rock salt, a substance which always, when it has the chance, assumes the figure of a cube, and if this be chopped or split up in planes parallel to the sides, each of the many pieces into which it is broken will be found to assume the same cubical form, or the grouping of such, the angle between two adjoining faces being always a right angle. But the division of crystals, according to their forms of cleavage, is not so satisfactory as to refer the faces to certain imaginary lines placed within or to a sphere around them. In this manner we find that the cubical system is characterised by one vertical and two horizontal axes, intersecting at right angles, and all equal. This reveals a perfect symmetry of the faces about the centre of the crystal. In the next system the hexagonal, or rhombohedral, to get perfect symmetry we require a vertical axis of different length (either longer or shorter) from the others, which are three in number, equal among themselves, and make equal angles with each other in a horizontal plane. To this system, as before mentioned, belong calcareous spar and beryl. To the next system, the pyramidal or tetragonal, belongs the ore of tin—one of the most valuable of British minerals—tinstone or cassiterite, and this, whether obtained from Cornwall, Peru, Australia, or elsewhere, has always the same symmetry—that of the group of axes exhibited, something like the cubical, except that two of its axes are of equal length, but the third one is unequal, sometimes taller, sometimes shorter, by many different steps, but never passing beyond certain limits. A fourth system is the prismatic or rhombic, of which the crystals of sulphate of baryta are an example, and it is characterised by having all its axes unequal, and all intersecting at right angles. This is the third instance of what relationship can exist between three axes; in the cubical system they are all equal; in the pyramidal two are equal and one unequal; in the rhombic all three are unequal. The next system has a symmetry somewhat different from the preceding; it is known as the oblique, and is characterised by having three unequal axes, two of which are at right angles to each other, and the third is inclined, making alternate obtuse and acute angles with one of the others. Several minerals of great practical value crystallise in this system—*e.g.*, felspar (orthoclase), gypsum, angite, &c. Some of the English clays contain fine crystals of gypsum about as large as a finger. The last system which is to be distinguished is the doubly oblique, or anorthic, in which the axes are all of unequal length, and each of them making various angles with the others. There is no right angle in this system, and it is comparatively a small group. Such perfect crystals as these, which are brought forward for illustration and study, are, of course, comparatively the exceptions; in most cases they are agglomerated together, and combined with other forms, and often differ very much, but if we get a good acquaintance with the principal faces and general form, we shall be able to recognise with greater facility these particular substances in any part of the world.

THE SOUTH MIDLAND INSTITUTE OF MINING, CIVIL, AND MECHANICAL ENGINEERS.

An ordinary monthly meeting of members was held in the rooms of the society on Monday. Mr. E. JONES, the President of the Association, was in the chair, and there were also present Messrs. T. Rose, R. P. Walker, S. Watkins, W. Davies, John Gething, J. Laxton, J. Naylor, W. Underwood, D. Davis, and Messrs. Austin, Hancox, Hodgkiss, Price, and the secretary. There were elected as new members Mr. F. A. Grayston, Glascote Colliery, Tamworth; Mr. John Thomas, Skidmore Row, Bilston; and Mr. Thomas Claridge, of Millfields.

A paper by Mr. John Gething, on "A Mode of Working the New Mine and Fire-clay Coals together by Long Work," was read, at Mr. Gething's request, by Mr. Hancox. The document was due to a request made to the author by the ex-President of the Institute, after the secretary read his paper, showing a large yield of coal in a colliery with which he had been associated, and comparing that yield with what was known to be contained in the seams, he enquired what had become of the remainder? Mr. Getting's paper showed certainly in respect of the workings which he described there was no remainder. He brought out all the coal by his method of long work, as compared with square. He adopted long work at the Monway Colliery, Wednesbury, some eight years ago, for he felt sure that there was a great waste of property by the square method of working. All the people about the colliery were wedded to the old method, and he had great difficulty in inducing men and managers to adopt long work. Mr. Smallman, however, the mining engineer, having consented, he commenced to carry out his plans, and the result had been in every way most gratifying. The yield had increased from 8194 tons, obtained by square work, to 12,965 tons obtained by long work, all per acre, and the tons made up of 24 cwts., and every cwt. 120 lbs. The expense of getting was the same per ton as before, whilst amongst the numerous other advantages attained were the safety of the men, and the getting rid of the necessity for having a number of boys in the pit. During the whole eight years no collier had been killed in the workings. There was one death, but that occurred about 20 yards from the shaft, to a miner who was at the time engaged in enlarging the gate-road. The ventilation, too, was greatly improved. Mr. Gething added that at the Furnace Leasor Colliery, in the same locality, he is now experimenting upon another new mode of working. At present he could not speak positively as to this further new plan being a greater success than the long work, for he had not yet had sufficient time to test it, but it seemed to answer very well. As far as he was concerned, he should be happy to show either colliery to any member of the Institute.

A very cordial vote of thanks was passed to Mr. Gething for his paper. It was esteemed as unwonted merit.—The PRESIDENT dwelt upon it in terms of great eulogy. In this case long work brought out all the coal. He remarked that mining engineers must not now say that they had nothing to learn from South Staffordshire. Whilst the old system was most laborious, this was a most efficient system. The yield was the largest upon record throughout Great Britain. (Applause.)

Mr. AUSTIN observed that the method of working was most excellent. It would not, however, apply to every colliery, and certainly not to one situated some 2½ miles away from that which Mr. Gething was working, where there was not in the first place anything to hole underneath the fire-clay coal; and where in the next place there was a soft fire-clay on the top of the fire-clay coal 4 ft. thick.

Mr. GETHING said that the circumstances were certainly very favourable, but there were other collieries possessing similar advantages in respect of deposition of the strata.——Two new members were nominated, and the business was over.

THE PROBABILITY OF COAL BEING FOUND UNDER LIVERPOOL.

An important paper was read on Monday evening, by Mr. G. H. MORTON, F.G.S., Hon. Sec. of the Liverpool Geological Society, before the Liverpool Literary and Philosophical Society, on "The Strata below the Trias in the country round Liverpool, and the probability of Coal occurring at a moderate depth." After stating the opinions of geologists and mining engineers, tending to show that coal has long been supposed to underlie the new red sandstone of Lancashire, Cheshire, and other parts of England, and showing the formations occurring in Denbighshire, Flintshire, Cheshire, and South Lancashire on the Government geological maps, he proceeded to say: At the close of the carboniferous period I believe that the whole of the country I am describing was covered by a continuous deposit of coal measures, with the underlying millstone grit and carboniferous limestone in an undisturbed position. Some idea of the enormous denudation that has taken place may be obtained from the fact that all these carboniferous stata, 6700 feet in thickness, have been denuded from off the Wenlock Shale of Denbighshire and Flintshire. It is a geological truism that lines of elevation are lines of weakness and waste, and that mountains crumble away when exposed to sub-aerial action for geological ages. Lines of depression, on the contrary, are lines of strength and durability, for the rocks are then buried and protected from denuding agencies. In this manner the carboniferous strata, which once covered the high land of North Wales, have been swept away, and only scattered patches of the limestone at the base left to indicate their former position; while more to the north-east there has been less elevation, and consequently such a reduced denudation, that a fringe of coal measures occurs along the south west of the Dee. Still further to the north-east, in Wirral, the gradually increasing depression brings in the new red sandstone overlying the coal measures, which seem to be fully developed and undenuded below it. The coal measures continue in this relatively depressed condition until thrown up to the east of Liverpool, where the Trias and Permian have been denuded from off them. Assuming that the middle, or productive coal measures underlie the new red sandstone in the country around Liverpool, the question is, whether we can reach the coal, and whether there is a fair chance of success in trying to obtain it. So far, no one has tried with sufficient capital and knowledge of the subject to have had any chance of doing so. Many attempts have certainly been made, principally in the keupers, marls, and sandstones, 2000 ft. above the coal measures, by persons who thought they were boring in the coal strata till they discovered their mistake and abandoned their undertaking. Nevertheless, such borings have been made about the red marl area, in Wirral, and there was another at Waterloo. Miners have told me that there is coal under St. James's Cemetery, and only a few days ago I was told that the Waterloo tunnel passes through the coal measures. In all these instances the similarity between the yellow sandstone and the grey shales of the coal measures and the keuper caused the mistake. In the event of a boring being made in search of coal below the Trias, it would be desirable to select a spot where the strata have been denuded, and where the pebble beds, or lowersandstones of the Bunter formation, occur at the surface. The lower Bunter is considered to be 400 ft. thick, but as its base is not known with any certainty in any section nearer than Sutton, no reliance can be placed on this estimated thickness; besides, it may vary considerably if the coal measures present a denuded surface. If, on the contrary, there has not been any material denudation, the thickness must be uniform, or nearly so. Assuming the lower Bunter to be 400 ft. thick, and that there is no Permian below it, the coal measures at Grange and Eastham, in Wirral, and under Crown-street, Liverpool, must be very near the surface—perhaps only 300 feet below it—but there is a great probability of the Permian occurring above the coal measures, and these would be the upper series, in which there are no workable coal seams. Although there are many spots favourably situated for an experimental boring, any person who undertakes the task must be prepared to run the risk of finding a few hundred feet of Permian strata, without the remotest chance of obtaining the slightest information on the subject, except what he obtains during the operation. He must be prepared for 1200 feet of upper coal measures—red strata, which colliery engineers never like—though they may not be so thick as supposed. If there has been little denudation of the coal measures before the deposition of the Permian, it seems probable that with the base of the pebble beds at the surface the upper coal measures would be reached at 800 feet, and the middle or productive measures at 2000 feet—*i.e.*, taking an average of probabilities, but no attempt should be made with a pecuniary object unless the projectors were able to bore a few hundred feet deeper if necessary. Coal might, certainly, be reached at a much less depth than 2000 feet, but, as a set-off against that chance, there is a great probability of having to go lower still, and a possible chance of not finding coal at all. The mere depth, however, does not present much difficulty, for there are several coal pits that are worked as far below the surface, but there was little or no risk in opening those collieries, for the existence of a particular coal seam at a calculated depth must have been known beforehand. But the great difficulty is to obtain the first experimental boring, for if that were successful in reaching coal an important section of the superincumbent strata would be obtained, from which very momentous conclusions might be deduced. If, for instance, there were Permian and upper coal measures with no apparent denudation the thickness of these formations would be known, and it would be safe to assume that the same conditions extend under a considerable area of the country around Liverpool. Under such a regular succession of the formations the depth of the workable coal seams of the Prescot and Flintshire coal fields, beneath the new red sandstone, might be approximately ascertained. But if, on the other hand, a coal seam in the productive series were found directly under the Trias, although the undertaking might be a profitable speculation in itself, there would be much doubt and uncertainty about the result of any other boring that might be made at a distance from the first, so that the general result would be far less satisfactory. For if the coal measures were faulted and irregularly denuded before the new red sandstone was deposited over them, each explorer would gain little from the experience of his predecessors, but would have to take his chance and be content with the result—coal or no coal, as might happen. In conclusion, I think that I have demonstrated that there is a valuable coal field beneath our feet. It would be easy to prove it absolutely for about 2000*l.*; but it is a question whether it is worth any person's while to do so—perhaps it deserves the attention of large landowners and colliery proprietors.

In the course of the subsequent discussion Mr. MELLARD READE said: As to the probability of finding coal under the whole area around Liverpool there could be no two opinions, for geologists had long held that the coal measures were in their full development between the strata on which they were then standing. In selecting a place for boring they must, of course, select a point where the superincumbent strata were likely to be of the least thickness. Mr. Morton had mentioned that near Eastham the lower beds of the Bunter came to the surface, and the principal question was whether they would be likely to find the Permian below that. The element of uncertainty which entered into all these geological speculations might be in their favour, for it was not at all likely that they would find the whole of the strata altogether fully developed. Where one was absent the other was present, generally, and from the previous formation of the ground, the surface during the carboniferous period having been denuded, having been thrown up, they had those points certainly nearer the surface; and he did not see why in proposing an experiment in order to try unknown ground it was necessary to take a desponding view of the matter. He was of opinion that an experimental boring was well worth the trying, and he was sure that if the strata around Liverpool were not worked now, or within a few years, they would be eventually. The Government Commissioner said that the greater part of the coal between Liverpool and the Dee could be got within a maximum depth of 4000 ft., which was the greatest depth coal could be worked; and taking the extreme depth, although Mr. Morton had shown that the depth would vary, he thought they would be quite safe and justified in considering that at outside depth of 2000 ft., if they selected their ground properly, which they could easily do, and, perhaps, even at a depth of 1000 ft., they would come upon coal, and thus largely extend the area from which at present the commodity could be obtained.

Mr. C. G. MOTT said he did not think Crown-street, Liverpool, would be an eligible place of boring, for it would be difficult to get the consent of the freeholders. He preferred Grange or Eastham: 2000*l.* would be required for the experiment, and, for the sake of scientific knowledge, he would like to see it made, and believed that the public would readily subscribe the money.

Mr. PICTON said if he were the fortunate owner of the land at Grange or Eastham he would welcome Mr. Mott's proposition, inasmuch as all the benefit would accrue to himself and the loss to the public. He questioned whether the philanthropy of the public would extend so far as to make such an experiment for the benefit of the landowner. He had very little hope that such an experiment would be made, at least for a long time to come, in that neighbourhood. So many concurrent circumstances had to be favourable that he would almost despair of the difficulties being removed. No doubt there was plenty of coal beneath their feet, and the only difficulty was to get at it, which was a problem that was not yet exactly solved.

Mr. ISAAC ROBERTS concurred with Mr. Picton, and said that a good deal of coal could yet be got at lower depths than that which was lying under Liverpool.

Mr. MORTON, in his reply, said he did not mean to advocate the sinking of a shaft in Crown-street, Liverpool, nor, indeed, in any portion of the town.

The proceedings ended with a vote of thanks to Mr. Morton for his paper.

THE COLLIERS' STRIKE IN SOUTH WALES: ITS CAUSE, PROGRESS, AND SETTLEMENT.

There is probably nothing of greater importance for enabling one successfully to overcome a difficulty than the possession of a complete knowledge of the details connected with similar difficulties which have been previously encountered, and of the mode in which they have been dealt with; and since the object of the volume* now under consideration is to furnish a complete record of the whole of the proceedings bearing upon the great South Wales strike of 1871, it will long be of much intrinsic value in dealing with disputes between labour and capital. The work, as Mr. Dalziel explains, is neither more nor less than an account of the strike, and where reference is made to prior events it is only that the ulterior effect may be the more correctly understood, It would be comparatively easy to state in a few sentences the superficial reasons which caused the late colliers' strike in South Wales, its progress and the present position of labour as affected by its settlement under arbitration; but it is desirable to examine minutely the motives which actuated relatively the employers and the employed in each step taken.

The ironmasters of Merthyr and the surrounding district being a compact and wealthy body, and employers of large numbers of workmen engaged in the getting of coal and the making of iron, have invariably swayed the wage rate paid in the coal-producing district of the Merthyr, Aberdare, and the Rhondda Valleys, and it appears from the table given that during the past ten years the advance in the colliers' wages has been from 20 to 25 per cent. The next two statements show the progress of wages during the past 23 years at one of the oldest pits in the Aberdare Valley, and shows that in that period the price paid for cutting has advanced 22½ per cent. The "Nine-feet" is a thick seam, and (like the "Four-feet"), being worked on the pillar and stall system, the price for cutting it was a shade less than the Four feet. In 1853 they were equalised, but when in 1867 the long wall system was introduced its application was not found to prove favourable in the Nine-feet vein. There was a difficulty in retaining labour at equal rates, hence the disparity. From the fact of the percentage of advance and reduction not being equally applied to all classes of workmen, it will be correctly surmised that concessions were made in certain cases which were withheld in others. Thus, door boys have advanced 100 per cent.; surface labourers, 30 per cent.; underground labourers, 50 per cent.; hauliers, 30 per cent.; colliers, for day labour, 20 per cent.; whilst cutting has advanced only 22½ per cent. In May, 1864, the amount paid to 438 door boys engaged in 24 pits in the Aberdare Valley was 168*l.* 14*s.* per week, or 7*s.* 8¼*d.* per week for each boy: and after the strike of the boys at Aberaw mboy, who were then receiving 7*s.* per week, the price was made uniform at 7*s.* 9*d.* In support of less than 20 boys claiming 1*s.* per week advance, 400 men cast themselves out of work for nine weeks, but the true reason was that the door boys' claim was intended to prepare the way for demanding a general rise. In accordance with the rules Messrs. Davis and Son made their claim for "expenses incurred and loss of profit" in resisting this strike, and the Association argued, properly one would think, that as the coal was still in the ground for future working the profits were only deferred, and therefore the Association should only pay the present value of such deferred profits. Mr. Dobson, to whom had been left the adjustment of the claim, awarded 4760*l.* in full.

When the excellencies of Welsh smokeless steam coal (now 40 years ago) first received public recognition the entire population of the Aberdare Valley, including even the town of Aberdare, did not exceed 6000; these mostly obtained their livelihood by agriculture and iron making. At the present time the population is probably over 40,000, all more or less dependent upon the production of coal and manufacture of iron. This great increase is attributable solely to the development of mines. The production of coal in 1844 was 71,031 tons; in 1856 it was 1,173,459 tons; and in 1870 it had further increased to 2,342,792 tons. On the opening up of the Rhondda Valley the difficulty of obtaining labour necessitated the payment of wages 10 per cent. in excess of the rate paid in the Aberdare Valley, and 25 per cent. higher than was being paid at the ironmasters' pits at Merthyr. When the general overtrading of the country resulted in a monetary crash and a season of depression set in, serious complication arose in the mining commercial interests. With the iron, as with the coal, trade the time of depression meant loss—continuance meant disaster. The ironmasters, having the command of an enormous supply of labour at the lower scale of wages, and possessing large mineral properties fully developed, found that the production and sale of steam coal would considerably ameliorate their monetary position. They cast into the market increased quantities of coal. For the first time the proprietors of the Aberdare and Rhondda pits found real and formidable competitors in the ironmasters, who by reason of lower royalties and the lower rate of wages were able to produce coal at a cheaper rate, and thereby undersell, which they did to a serious extent. The Merthyr ironmasters exported 166,399 tons of coal in 1865; and 349,968 tons in 1871. In like manner the ironmasters of Monmouthshire increased their export of coal. The effect on the steam coal trade can be imagined.

At the end of 1870 the ironmasters and the colliery proprietors of Monmouth and Glamorgan, finding the markets still continuing to be depressed, cast about them for a remedy, and finding it necessary to make a general reduction in wages, took conjoint action towards that end. On March 1, 1871, notice was given at all pits that all subsisting contracts would terminate on March 31. It was generally understood that the reduction was to be 10 per cent., but the ironmasters did not observe the arrangement. Crawshay Bailey, at Nant-y-Glo and Blaina, and Darby, at Abersychan, laid the foundation for the strike by declaring the reduction at 5 per cent. only. The fact was, although Mr. Dalziel does not mention it, that Crawshay Bailey thought to turn his neighbours' misfortunes to his own profit; and, as he distinctly stated in London, it was worth his while to pay 5 per cent. more if it would attract more labour to him, because the more men he could get from other places the greater would be the embarrasment, and then a 15 per cent. fall in the price of wages, or a corresponding rise in the price of coal would compensate him, and answer his purpose equally well. The report of the committee, appointed on Feb. 25 "to obtain reliable information with reference to the existing discrepancies between the rates paid for labour at the steam coal collieries in the Merthyr, Aberdare, and Rhondda districts," prepared for presentation at the meeting convened for March 25, showed that, considering the different thickness of the 2 ft. 9 in. seam in the Merthyr district and in the Aberdare Valley, and considering the difference in hardness of floor and roof, there was no appreciable difference in the work (done for each 1*s.* paid) between the Merthyr and Aberdare Valleys. In Rhondda Valley the seam varies in thickness: and as between the Merthyr price and the price paid at the lower part of the Rhondda Valley there was a difference of 6*d.* per ton against Rhondda. There was a difference in the cutting price of the 4-ft. seam in Aberdare and Rhondda, as compared with the ironworks, of 4*d.* per ton in favour of the ironworks. In the 6-ft. seam and in the 9 ft. seam the cutting price was 2*d.* per ton in favour of the ironworks. Other seams were not extensively worked at any of the collieries, so that no comparison could be made. It must, however, be understood that these figures do not represent the actual differences been the rates paid at the different districts, because work is included in the cutting price at the ironworks, which is paid for as "allowance" in many of the Aberdare and Rhondda collieries, but in Rhondda much more so than in Aberdare. The difference in the rates paid for general labour between Aberdare and the ironworks was 12½ to 15 per cent., and Rhondda was about 5 per cent. above Aberdare. The difference in the rates paid for timbering and dogging between the ironworks and all the collieries was very great indeed, amounting in the average to nearly 50 per cent.

At the meeting of managers held at Mountain Ash it was unanimously agreed that the depressed state of trade justified a reduction of 10 per cent. on all labour in connection with collieries, but owing to the division among the ironmasters it was considered that the equalisation of wages should be deferred for the present. The depression continued, yet on May 1 the men, supported by the Union, gave a general notice, and demanded 10 per cent. more wages. At a meeting representing 18,326 men, 3497 were for accepting the masters' terms under the existing circumstances; 3724 were neutral; 4940 would hold out for the 10 per cent. advance; 7147 were ready to accept 5 per cent. The majority, therefore, were in favour of accepting 5 per cent., but a blank refusal for any advance having been given by the masters, the strike was resolved upon. This decision was influenced by the statement of the chief officer of the miners' Union, that the society had at its command in England and Wales, 40,000 to 50,000 miners ready to pay their weekly levies, and partly because the ironmasters in Monmouthshire and Merthyr, and

* "The Colliers' Strike in South Wales: its Cause, Progress, and Settlement." By ALEXANDER DALZIEL, Secretary of the South Wales Steam Colliers' Association, Cardiff.

what was more some even of the Aberdare Colliery owners, had agreed to give the workmen 5 per cent. The figures given in the society's report of the Manchester meeting shows the utter untruthfulness of the report that 40,000 to 50,000 were ready to contribute. The number of members were—in Wigan 3000, and Union not progressing; Tamworth and Kearsley 1800, at a standstill; Worsley 890, falling away; St. Helens 501, increasing; Hollingwood 50, falling off; North Staffordshire (where there were 9000 hewers, earning not more than 18s. per week) 2500, falling off; South Wales, 12,000 at most; Monmouth, 3000 at most; and North Wales, 130—23,901 in all. From this it is evident that the total aid which the Amalgamated Association of Miners could possibly give to the Welshmen was the contributions from less than 9000 men, which, at 1s. per week, would yield but 450*l.* per week—an important amount when divided among 10,000 men. Even assuming the South Wales collieries to subscribe thrice that amount, making (say) 2000*l.* per week in all, the men could have received but a very small amount each. The officers of the Union promised 10s. per man per week, yet 10,917 men were on strike, leaving 12,984 men to subscribe 5458*l.* 10s. per week; so that to fulfil the promise each unionist at work would have had to contribute nearly 8s. 6d. per week. After the men had been out three weeks the Associated Miners could only get together 600*l.* to satisfy the claim upon them for over 16,000*l.*, and many of the men would gladly have resumed work had not the fear of their fellow-workmen prevented them. Even before the strike commenced men earning 12s. per day in cutting coal were compelled by the Union to limit the amount of coal cut, so that they received but 6s. 6d. per day, inflicting equal injury upon themselves and their masters.

That the non-associated masters behaved, to say the least, unloyally is beyond question; they employed, although pretending not to do so, all the men they required, and were at the beginning of July buying more horses, and increasing their output of coal, but the majority of men on strike were suffering severely. The Miners' Association ruled that 7/6 only of the Union men in Aberdare Valley were entitled to relief, the remainder, making up 6000 in all, only having joined when aid was wanted. The justice of this view cannot be doubted. On July 13 the Associated Masters repeated the offer, made June 14, to refer all matters in dispute to arbitration, or to resume working at 7½ per cent. reduction on the prices paid in May, on condition of both parties being bound to the terms for 12 months (except in case of the ironmasters advancing their prices, when an equivalent advance was to be given). The meeting was adjourned to July 20, for the men to have time to reply. No reply was given. On July 15 the Society paid the third instalment—3s. 2d. per man—for the fortnight. Efforts were made in Staffordshire and in Cornwall to obtain men to re-start the pits, but the circulation of false statements by the Miners' Association prevented the effort succeeding. On Aug. 15 a deputation of 19 colliers, representing the majority of men on strike, met the masters at the Royal Hotel, Cardiff, and, after much discussion, in which Henry Thomas, a very intelligent collier, of Abercwmboy, ably represented the men, an agreement was entered into that—"Whereas disputes and differences as to the rates of wages, duration of hiring, mode of working, and other matters having arisen between the proprietors and the colliers and other workmen connected therewith, it is hereby agreed that all such matters in difference shall be referred to the arbitration and award of . . . . and their umpire, provided that in fixing the rates of wages and prices the arbitrators and their umpire shall be governed by the rates paid for similar descriptions of work at other collieries raising steam coal in Monmouthshire and South Wales; and that such arbitration shall be proceeded with in conformity with the provisions of the Common Law Procedure Act, 1854." On Aug. 17 the colliers, at a mass meeting, ratified the agreement, and the settlement would have been speedily arrived at but for the insertion in newspapers of editorials written without knowledge of the terms of the agreement above quoted. The venomous writing, however, merely delayed the settlement for a short time; the arbitrators were appointed, but owing to the difficulty of these agreeing to an umpire they were not in a position to commence their investigation until about Christmas.

The arbitration was commenced on Jan. 29, and the award was made on Feb. 13. This award gave the colliers 2½ per cent. advance upon the prices paid in May, 1871: the colliers were, therefore, entitled to 6d. in *l.* on wages earned between Aug. 20 and Feb. 1. After Feb. 1 the 10 per cent. advance which the ironmasters were about to give was to be added to the 2½, making 12½ per cent. on the May prices from Feb. 1, and subsequent rises or falls at the ironworks were to be followed by corresponding rises and falls at the collieries. The loss to the masters was large, for it is shown that the strike reduced the sale of South Wales coal by 500,000 tons. The loss to the men was enormous. The loss of wages alone during the 12 weeks to the average number of 10,000 workmen, would be probably 120,000*l.* Against this they received from the Union the paltry sum of 6383*l.* 1s. 2d. Thus, the men threw away 120,000*l.*, and nearly starved their wives and families in fighting 12 weeks for 2½ per cent.=3000*l.* Supposing the wage rate not to fall, then it will take the colliers 9¼ years to replace them in the position they occupied before the strike. It cannot be alleged that the 10 per cent. advance on Feb. 1, 1872, was the result of the strike. They received the 10 per cent., as the arbitrators very properly stated, for reasons irrespective of any question then involved.

In publishing the volume Mr. Dalziel has conferred a lasting benefit upon both masters and men; it will prove to masters how dangerous it is to rely upon the co-operation of other masters not circumstanced exactly like themselves, and it will prove to the workmen that when the Union promises them 10s. per week they must not rely on more than 12¾d. per week, which was the average amount paid by the Union to the colliers in South Wales. The colliers gave up, by striking, 1*l.* per week (the average is in all cases for men and boys) for 12 weeks, and received in return from the Union and from the arbitrators together 1s. 7d. per week. Whether the experience will have a lasting effect is much to be doubted, for the delegates must keep the men dissatisfied in order to be enabled to prey upon them, and they find it quite easy to induce less educated workmen to place confidence in their promises. Mr. Dalziel's advice may well be taken by both parties—"They should not retaliate; they should forgive, but not forget."

FOREIGN MINING AND METALLURGY.

In the Charleroi basin and in that of Mons the extraction continues active and well sustained, as coalowners are working out old orders. As regards the future, however, a good deal of hesitation prevails, so that it would be difficult to fix prices, even approximately, for contracts for next year. This state of things will not last long, and we shall know before the close of the month whether the anticipations entertained as to a probable fall in coal will or will not be realised. Meanwhile prices have remained pretty well supported. From the Mons basin complaints come to hand with reference to insufficiency of trucks and irregularity in railway traffic arrangements. The Belgian glass trade, which is a customer of the Belgian coal trade, is not in a very prosperous condition, 40 furnaces having been extinguished in the Charleroi district; there is a temporary falling off in English orders. The Carabinier Colliery Company will pay on Jan. 2, 1873, interest at the rate of 1*l.* per share, in respect of the exercise 1872.

The French Coal Trade has become quiet, and prices remain stationary. Colliery proprietors show some hesitation in concluding contracts for the future, and there is no less hesitation among purchasers, who hope, and probably not without reason, for a fall in prices at no distant date. Deliveries of coal by railway are made with tolerable regularity, but in consequence of heavy floods deliveries on the navigations have generally fallen in arrear. According to a report prepared by the Government mining engineers, the extraction of coal effected in the collieries of the Department of the Nord in the first six months of this year was 1,500,000 tons, and in the collieries of the Pas-de-Calais 1,200,000 tons. The Bouches-du-Rhone Colliery Company has been paying this month a dividend for 1871 at the rate of 12s. per share. The Epinac Collieries and Railway Company has also been paying this month a dividend for 1871-2 at the rate of 5*l.* per share.

The Belgian iron trade displays, upon the whole, increased weakness, although prices have experienced little change at present. Plates have slightly given way; pig has been better supported; merchants' iron has also resisted pretty well the downward tendency in quotations. In rails there have been comparatively few transactions, old contracts are being worked out, and adjudications for the State lines are being awaited. A Pomeranian railway company has commenced legal proceedings against the Montigny Rolling Mills, &c., Company for delay in the execution of its rail contracts. The Pomeranian company demands a large sum (between 80,000*l.* and 120,000*l.*) as damages, relying on the fact that the delay experienced in the delivery of the rails involved considerable loss, as it prevented the working of the line. The quantity of rails which led to this dispute is stated to have been from 8000 to 10,000 tons. The questions involved in the case are, of course, of considerable importance; if judgment should be given against the Montigny Company other Belgian firms and companies may be attacked in a similar manner. Complaints are made as to the strength and purity of Spanish minerals purchased at Bilbao and Santander. Messrs. Balieux and Co. have been officially authorised to establish ironworks at Marchienne-du-Pont. The Association of Engineers, educated at the Liége school, will celebrate on Dec. 26 the 25th anniversary of their establishment. Papers will be read during the meeting on the Chaudron system, the Bessemer and Martin processes for the manufacture of steel, the Danks furnace, &c. The works of the Cockerill Company, the Sclessin Company, the Hasard Company, the Marihaye Company, &c., will be thrown open for the inspection of the members of the association.

The French iron trade has not yet exhibited much reduction in prices; the demand is abundant, and the works have still many engagements. Measures are being taken at several points for increasing or improving the means of production. Thus, the Notre Dame des Anges metallurgical establishment, at Kustrel, is about to be brought into activity; among the parties who are interested in the affair may be mentioned M. de la Rochette and Co., of Givors; the Terre-Noire, Lavoulte, and Bessèges Company; and, finally, the Horme Company. M. Ferdinand de la Rochette (manager of the Givors Blast-Furnaces Company), M. Harel (manager of the Pont l'Eveque and Givors Blast-Furnaces and Forges Company), and M. Chalaupre (director of the Franche-Comté Forges Company), acting as representatives of the companies to which they belong, are soliciting a concession of iron minerals in the commune of Arvillard, in the arrondissement of Chambéry, in Savoy. In the Nancy group there is considerable activity. Thus, the foundations are being completed of a second Bar-le-Duc furnace, which will be brought into operation in February or March, 1873. This new furnace, the production of which is already engaged for a considerable part of next year, will turn out refining pig. Another furnace at Bar-le-Duc, now in working, produces, as is well known, casting-pig, which is much sought after, by reason of its excellent quality. The Bar-le-Duc works are united to the Eastern of France Railway by an industrial branch. A great blast-furnace at Brousseral is about to be lighted. The number of forges is increasing in France; thus, a new one is being built near the Sedan station. The rise in the price of iron this year has been a source of great profit to France, more so than to any other country on the Continent. Rolled coke-made iron has made 14*l.* to 14*l.* 8s. per ton in the Haute-Marne; hammered, 15*l.* to 15*l.* 12s. per ton; and ordinary boiler-plates, 20*l.* to 20*l.* 16s. per ton. Bad weather and floods have interrupted working operations in a good many establishments, and some works have been even obliged to stop altogether. The mechanical works of M. Charles Bonnefond, at Ivry, have just been taken over by a company, under the patronage of the Franco-Italian Bank. The new concern has been formed under the title of the French Railway Plant Company; its object is to supply fixed and rolling stock (rails excepted) for railways and tramways. The capital is 100,000*l.* fully paid-up, and represented by 5000 shares of 20*l.* each; M. Charles Bonnefond, who receives in consideration of his goodwill 2400 shares, has been appointed managing director of the new undertaking.

At Paris the copper trade has displayed little animation, but nevertheless prices have revived to the extent of 2*l.* per ton. Chilian in bars has made 88*l.*; ditto in ingots, 92*l.*; ditto Tough English, 92*l.*; and Corocoro minerals, pure copper, 90*l.* per ton. At Havre there is scarcely any stock of Chilian copper, and prices are almost wholly nominal. At Marseilles copper remains without change, and quotations are pretty well maintained. The German copper markets have exhibited an improved tone. At Paris, Banca tin has fallen to 160*l.* per ton, but tin from other sources has exhibited little or no change. At Marseilles the tin trade has also been weak, and holders have been almost every day making fresh concessions. At Amsterdam transactions in tin have been limited; Banca is quoted at 89 fls., and Billiton at 85½ fls. The Rotterdam market has been weak, but at the last dates a slight improvement had occurred. The German tin markets have reflected the weakness of the tin trade in other countries. A fall of 8s. to 12s. per ton has occurred in all qualities of lead at Paris. French lead delivered at Paris has made 22*l.* 12s.; Spanish delivered at Havre, 22*l.* 4s.; English delivered at Havre, 22*l.* 12s., and Belgian and German delivered at Paris, 22*l.* 8s. per ton. Lead has maintained a good tone at Marseilles. The aspect of the German lead markets has also been firm, and prices have advanced. Upon the Paris zinc market prices have been hardening to some extent; quotations may be taken at 24*l.* 12s. per ton for zinc from all sources. At Marseilles zinc quotations have been, to a great extent, nominal. In Germany transactions in zinc have been comparatively limited, and prices have exhibited little change.

MR. HENRY SEWELL, MINING ENGINEER.—In the course of the Emma legal proceedings at Salt Lake City, Utah, Mr. Henry Sewell (who was one of the principal witnesses) testified "that he received his mining education at Freiburg, in Germany, having graduated at that famous school of mines in 1850; that he had travelled through nearly all the mining countries of Europe, and examined most of the European mines; that he had been engaged in mining operations in South America for over eight years, and that for the last two years he had been employed in the examination of mines in Nevada and Utah. He stated that veins were of three kinds—strata veins, which lie between and follow the course of the strata of the surrounding country rock; fissure veins, which cut the formation of the surrounding rock; contact veins, which lie between different formations of rock. He pronounced the Emma vein to be a strata vein, surrounded by limestone, and running with the strata of the limestone on Emma Hill, which has a general direction from north-east to south-west." Some sharp passages occurred between the witness and Mr. Smith, counsel for the defendant, in which it was generally held the legal gentleman came off second best.

WYOMING MINE (Nevada City).—This mine continues to turn out splendid looking ore. The last rain, a few days ago, exposed to view some ore on the dump fairly studded with gold. A body of ore has been reached in the west drift which shows specimens valued at $100, $80, and $50; one piece we have seen for which $100 was offered, and the beauty of it is the gold is diffused throughout the sulphurets, which go as high as $200 per ton. The character of the rock gets better and the sulphurets richer as the mine is being opened. About 300 tons are now on the dump which will mill $30 per ton. Many of our mining experts have visited the mine, and all come uniformly to the conclusion that, if the mine continues to hold out and develope as it shows at present, it will be the leading mine of Nevada. The ledge where these specimens came from is over 3 feet thick, heavily charged with sulphurets. Such news is encouraging, and should be an incentive to others to bring to the surface and develope the untold wealth of our California mines, which only require capital and prudent management to make their owners wealthy. Nevada county has always been a famous quartz section, and the idea that the mines of that county had been exhausted is dissipated by the continual discovery of new ledges, which await capital for development.—*San Francisco News Letter.*

UNITAH AND BINGHAM.—Prof. Clayton has recently visited these mining districts, and speaks hopefully of their future. He made a careful examination of several of the more important developments lately made in Parley's canyon, and from a number of specimens he there obtained an average assay of 200 ozs. of silver to the ton of ore has been made. In Bingham the professor spent several days, giving particular attention to the workings adjacent to the upper part of the canyon. The West Jordan and the Utah Mining Companies' properties were especially selected by Mr. Clayton for inspection, and he was afforded every facility for a critical examination of both those properties. In the West Jordan he found a good body of payable ore in view, the galena averaging 50 per cent. in lead, and the silver ranging from 15 to 40 ozs. to the ton. New developments are being made, and the mine is presenting very encouraging features. In the Utah company's property the extensive undertaking, the magnitude and general arrangements of the works, the completeness of the new hoisting machinery, the thorough management of the whole elicited from the professor remarks of surprise and praise. The Red Warrior lode contains a deposit of galena ore, surpassed in extent only by the Comstock, and but for the low grade of the ore in silver it would be one of the most valuable mines on the Pacific Coast. The discovery of valuable deposits of gold in place in Bingham is looked for, the result obtained from a test assay of gold-bearing rock obtained there pointing to this conclusion.—*Salt Lake Daily Herald*, Nov. 10.

EUREKA (Grass Valley).—During the year ending Sept. 30 they have driven 881 feet of drifts, 644 feet of cross cuts, sunk 223 feet of main shaft, and also sunk 105 feet of winze and run 363 feet of tunnel. The vertical depth of the main shaft is 961½ feet, or 1072 feet on the incline. They have hoisted 9925 tons of quartz, and crushed 9730 tons in 293 running days, averaging 2079 tons per day to each stamp. Of sulphurets 103 tons have been concentrated, 77 tons worked, and 30 tons remained on hand, worth about $3900. During the year 9925 tons of quartz were extracted from the various levels of the mine. There were upwards of 4000 tons of good pay ore in sight that the superintendent calculates will pay all ordinary expenses, for the further development of the mine for the next six months at least. The assets are estimated at $150,599·31, of which the mill is calculated at $40,000 and the building and improvements at the mine $30,000. There are no liabilities. The average value of the ore worked was $22·95 per ton, and the average yield of the sulphurets $127·22 per ton. Bullion from the mill was worth $17·56 per ounce, and that from the chlorination works $19·74 per ounce. The cost of mining 9175 tons was $101,184·07, or an average of $11·03 per ton. The cost of milling 9730 tons was $22,856·32, or an average of $2·35 per ton. The cost of concentrating sulphurets was $17·68 per ton, and of reducing them $28·06 per ton. The nets profits were $61,799·86, of which $20,000 was paid as dividends to stockholders; $8885 for construction and $6008·50 for the Mobile Mine. From the formation of the company, Oct. 1, 1865, to Sept. 30, 1872, the receipts were $3,606,265·91, of which $3,585,543·85 were from bullion taken out. Of the disbursements $1,714,000 was paid out as dividends; $1,381,614·69 for mining and milling expenses; $301,906·50 for titles to property, &c., and $141,939·71 for construction. The net profits from Oct. 1, 1865, to Sept. 30, 1872, were $2,224,651·12.—*Mining and Scientific Press* (San Francisco).

EXTRACTING PRECIOUS METALS FROM COPPER PYRITES.—Mr. Fred. Claudet has presented to the French Academy of Sciences a description of a new process for extracting precious metals from copper pyrites. The copper pyrites of Spain and Portugal contain gold and silver, but in such small proportions that it was supposed these metals could not be economically extracted. But, inasmuch as the increased consumption of the sulphuric acid has raised the importation of pyrites to 400,000 and 500,000 tons yearly, and is constantly increasing, the author concluded that it would be possible to extract with advantage the precious metals from the pyrites. The method pursued was as follows:—The ore having been broken and screened, was roasted in a reverberatory furnace, at a low temperature, with addition of chloride of sodium. It was then placed in a large vat, with a double bottom, forming a filter, and washed several times with very diluted hydrochloric acid; the water used in this lixiviation contains, after passing through the digested mass, sulphate of soda, chloride of copper, and chloride of silver, the latter resulting from the action of the hydrochloric acid upon the silver of the pyrites. When the copper only is to be extracted, the resulting solution is run into another vat containing scraps of iron. Chloride of iron is thus formed, and the copper is precipitated in a metallic state, carrying with it a slight quantity of silver. The copper precipitated is then melted and refined. To effect the elimination of the silver M. Claudet takes the water from the first three washings, which contains 95 per cent. of the whole silver, and allows it to flow into a wooden vat, where it is permitted to stand in order to separate the solid substances suspended in the liquid. The water, after the settling is run into another vat, where it is tested: a sufficient proportion of iodide of potassium is then added, and treated with 1-10th its volume of water. The mixture is allowed to stand for 48 hours: the supernatant liquor, then perfectly clear, is removed, and the vat filled up again in order to renew the operation, &c. The liquor removed contains still a very small amount of silver—*i.e.*, about 5 grammes per cubic meter—because iodide of silver is not completely insoluble. It is then treated for copper as we described above. Every fortnight the deposit found is collected—it is composed principally of sulphate of lead, iodide of silver, and salt of copper. The two latter substances are easily separated by washing with weak hydrochloric acid. The deposit thus freed from copper salt, is decomposed by metallic zinc, which in presence of the acid, reduces the silver completely by combining with the iodine and forming an insoluble iodide of zinc. The results of this treatment are—an insoluble iodide of zinc which, separated by filtration, is tested and used in place of iodide of potassium for the subsequent operations, and a deposit rich in silver, composed chiefly of lead in a metallic state, and several foreign substances. It is now easy to separate the silver product by the ordinary process. The extraction of 20 grammes of precious metal per ton of roasted pyrite is not considerable, but from 375,000 tons of ore there will result 7200 kilog. of precious metal, whose value is about $340,000.—*Iron Age* (New York).

FOREIGN MINES.

ST. JOHN DEL REY.—The directors have received, per Senegal, the following report, dated Morro Velho, Nov. 1: Sinking in the shafts during October: A shaft, 3 fms. 3 feet 1 in.: B shaft, 3 fms. 3 feet 4 in. The sink of both shafts is still in lodey ground, which is much harder to bore, and not so favourable for blasting as the slate formation through which we have hitherto passed; the duty performed we consider good. The heavy rain fall we have had has not as yet sensibly increased the quantity of feeders in either shaft.

DON PEDRO.—Produce to Oct. 28, 2098 oits.; estimate for month, 3226 ozs. Mine captain's letter, dated Oct. 28: It is with deep regret we have to state that the mineral obtained is again of low value. We expect, however, to increase the returns a little next month. Stoping operations have been continued on No. 8 shoot as usual, and the lode throughout is much the same as last advised, but the stoping of other sections has not been continued, for reasons previously assigned. The incline for drainage of necessity has remained under suspension, but the preparations for fixing the necessary pitwork, &c., are now drawing near completion, and we expect to commence the first for 30 fathoms cross-cut in the early part of next month. The ground so far as we have seen is very favourable for excavating.—Stopes, No. 8 shoot: Occasional good strake work samples have been taken from various parts of this shoot, but the ores generally are of less value. We have made sufficient repairs to various shafts at the horizon of Alice's level for the present, and shall immediately resume stoping operations in the southern or better portion of this shoot, so we may expect mineral of a little better quality in the coming month.—Prospective Works: The permanent incline plane has been continued to its reduced size very favourably. All other works are being carried on as usual.—Explorations, Dawson's Mine: The ground has become more settled, and good looking lines of jacotinga intersected with quartz have been met with, but more auriferous. Otherwise no change has taken place in our explorations.

ROSSA GRANDE.—Extract from letter dated Oct. 28: Bahu: Since my last advices, dated the 16th inst., the lode in the sump-shaft has increased in size from 3 feet to 4 feet 6 in. wide, still of good quality, and apparently opening wider in depth. I commenced the 28 fm. level, east and west of sump-shaft, on the 21st inst.; the lode in the 28 east is 4 feet wide, and in the 28 west 4 feet 9 in. wide, in both ends of good quality. The lode in the 18 west is 2 ft. 3 in. wide, of average quality, but on account of the end being so hard and wet I am sorry to say slow progress is being made in extending same, however, every man employed is doing his best, and taking into consideration the nature of the ground I see no cause for complaint. The lode in the 10 west has become narrower since last reported on, at present 2 feet 9 in. wide, of good quality, and presenting every indication of increasing in size; the ground is hard, and slow for driving. Owing to our having met with water in Dinne's shaft I have suspended sinking until the 10 fm. level is communicated with same, thereby in case of a continuation of water obviating the necessity of drawing it above this level. In exploring eastward nothing has been discovered calling for remark.—Cachoeira: The lode in the bottom of Richard's shaft is 2 feet wide, producing fair samples of gold. Very good progress is being made in driving the 20 fm. level east, where the ground is speedy, and the lode improving as we advance eastward; at present 2 feet 6 in. wide, of good quality. The lode in the 10 fm. level end east continues about 1 ft. wide, of average quality. The lode in the adit end is 1 ft. 3 in. wide, still very poor. There is no change in No. 2 cross-cut calling for remark since last reported on.

ANGLO-BRAZILIAN.—Extract from letter dated Oct. 29: Passagem: An increase of produce for the month may be looked for, the duty of the stamps being greater since the first fall of rain. The deep adit bottom stope, though it continues to yield well, is not so compact for pyrites as formerly. The workings on Dawson's top lode are more favourable in the back of the stope, several strong leaders of rich pyrites have been cut, and from their present way of inclination promises to open out larger as we advance, and additional force has been drafted to same.—Reduction Department: The average produce per ton of ore is fully up to that of last month, while the quantity of stone treated is greater. One of the arrastres has been working with good results the greater part of the month. The other one, now under repair, has a new gudgeon (much required) for axle of same will be in readiness in the course of a few days.

GENERAL BRAZILIAN.—Extract from letter dated Oct. 25: St. Anna: A party of blacks is employed clearing old Brazilian workings in the old adit.—Itabira: On the 9th inst. the driving of the shallow adit was resumed, ground rather troublesome. The company's agents advise the arrival of Capt. T. Treloar at Rio de Janeiro, and that he left for the mines on Nov. 1.

SAO VICENTE.—Extract from letter dated Oct. 28: Everything in the mine is going on much the same as when I last wrote, with the exception of Bernard's adit, which I am obliged to suspend for the present in consequence of the heavy rains. The deep adit is progressing favourably, but the stuff is not auriferous. The No. 1 level is very favourable for driving; during the week we have taken some very good samples of gold from here, but until I sink a little on it I cannot say if it is likely to hold. The No. 3 level, which has been hard for so long a time, is now in very favourable ground for driving; it shows a few fine particles of gold in the batea, but nothing of any value; at present it cost $4 per fathom.—Sao Vicente Proper: At Dawson's the line is without any notable change, but the water in the shaft is a little more. At Morro das Almas there appears to be a slight improvement in the line, but the ground is hard, so that we can only make slow progress. The large deposit of quartz is still opening well, and if persevered with will realise all our expectations. Buracaoa is under suspension until I hear further from the board as to what the shareholders are willing to do with it.

FRONTINO AND BOLIVIA (South America).—The directors have advices under date Oct. 12 from Messrs. Restrepo, the company's bankers, at Medellin, accompanied by the usual accounts, and a remittance of gold valued at 700*l.* 15s. 2d., thr produce of the Bolivia Mines for the month ending Sept. 20 last. The cause of the smallness of the remittance is that assigned in Messrs. Restrepo's letter of last month, and in Mr. Barreneche's report. The following are the accounts for the month ending Sept. 30:—Cost: At Frontino and Bolivia Mines, and expenses in London and Medellin, 1229*l.* 4s. 8d.—Produce: 301¾ ozs. of gold dust from 1780 tons of mineral (average yield per ton, 3 dwts. 9 grs.), 700*l.* 15s. 2d.: loss, 528*l.* 9s. 6*d.*, The less at the Bolivia Mines will, no doubt, cease as soon as the repairs to the mills are completed. One of the mills is already at work, and the other, it is believed, would commence work about Oct. 18. The cost of this month has been increased by the erection of the new smiths' shop. As regards the Frontino Mine, the prospects there seem of a most encouraging kind, and should the agent's report be confirmed by the gentleman who has been sent to Frontino by Messrs. Restrepo there is no doubt of there being a brilliant future for this mine.

EMMA.—Telegram from Salt Lake City, Dec. 2: "Raised 350 tons first-class ore this week; 400 tons first-class ore at railway depôt; 470 tons first-class raised ore at mine. Sold 220 tons here."

CAMP FLOYD (Silver).—E. B. Wilde, Nov. 5: So far as regards the stories in circulation that the lode or ore is gone and the mine used up, I have only to say that there is no truth whatever in such assertion. In incline No. 1 we have a large body of ore on each side extending to, and south of incline No. 3, beyond open cut. From near bottom of incline 1, I have started in a cross-drift, now in ore; a portion of this ore in sight is a good milling ore, and the remainder (greater portion) runs from $16 to $45. Shaft No. 3, with the whim I am sinking, in this shaft 115 ft. deep, we struck a large vein, carrying, however, but little ore; assays varying from $3 to $10 per ton; on this ore I have drifted some 80 ft., but find no improvement thus far in the grade of ore; this you will please bear in mind is an upper vein, above the Sparrowhawk vein, and to strike this latter, I am now pushing the shaft down as rapidly as possible: present depth (Oct. 31) 132 feet, in limestone. The cross-drift is in ore (first referred to), which assays $40·35, and $45 silver, and will eventually connect with the Last Chance cut, No. 1.

I. X. L. (Gold and Silver).—Lewis Chalmers, Nov. 4: The frame of the hoisting-buildings is up, and the roof on, and shingling will be commenced to-morrow. As soon as this is finished all hands will go on the works over the new shaft, and ten days will finish them, and enable me to resume sinking.

LAST CHANCE.—Mr. N. M. Maxwell, the superintendent, writes, under date Nov. 9:—I very much regret to say that Messrs. Booth and Co., of San Francisco, have not yet sent forward the pan for making our amalgamation trials, and I am still undecided as to what course to pursue for the treatment of the bulk of the ore in the mine, which is chiefly milling ore. When the pan arrives I intend spending several days on the mine to conduct the experiments, and will advise you of the result by telegram. We have some good smelting ore in the upper levels, which gives average assay of $112 and 58 per cent. lead. In driving on these levels we are getting out a quantity of this ore, and have now some 40 tons of it at surface, which we can presently sell to the Saturn Smelting Company, or to the Utah Mining and Smelting Company; the larger we can make the parcel the better price we shall get for it. In the meantime the mine is being developed well, and a large quantity of ore ground laid open, and as soon as we have the necessary works in operation for reducing our ores good and regular dividends will be insured, but any haste leading to mistakes in the character of the reduction works suited to the treatment of our ores would be fatal to the interests of our stockholders. No one regrets more than myself the delay which has taken place in consequence of the great change which has taken place in the character of the ore, but I am quite satisfied as to the ultimate result, and I believe the shareholders will see that the caution I am exercising is all for their benefit eventually. I have caused application to be made for a United States patent on the property, and as soon as it has been obtained I will advise you. You may rest assured that I am doing all that lays in my power to promote the interests of the company; they have a fine property, which only needs a little further time to make available.

BRAGANZA.—Morro Tabac, Oct. 28: Since the last report the ground in the level we are driving in the Cata Branca has become hard to bore and difficult to blast, still we are making progress, and do not think we are than 2 fathoms from the lode (the mineral referred to in a former letter is antimony). The trial we gave it in our stamps leaves no doubt on my mind of its being auriferous—in fact, we have found several stones with the gold visible. Should a further trial prove encouraging we must set about erecting stamping-mills on the spot, where we have everything in our favour—a very considerable fall of water, which is abundant, and which runs a few fathoms above our present level. The stone is so hard that we can obtain but little gold from it by hydraulic process, still by passing it through the water it yields a little, sufficient to prove that even this stone (itacolumnite) is auriferous when in the vicinity of a lode.

[For remainder of Foreign Mines see to-day's Journal.]

McKEAN'S ROCK DRILL,

FOR MINES, TUNNELS, QUARRIES, AND SUBMARINE WORK,
500 *TO* 1000 *STROKES PER MINUTE*
(counted by mechanism).
PENETRATES GRANITE 6 TO 12 INCHES PER MINUTE.
MACHINES WARRANTED.

For full description, &c., see "ENGINEERING" of July 26, 1872, and "MINING JOURNAL" of July 27, 1872.

One of McKEAN'S ROCK DRILLS may be seen working in Aberdeen granite from One to Four o'clock daily at 42, Borough-road, S.E., London.

These machines are manufactured for McKean and Co. by
MESSRS. P. AND W. MACLELLAN, "CLUTHA IRONWORKS," GLASGOW;
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AND E. REMINGTON AND SONS, NEW YORK.

SMALL PORTABLE BOILERS, or AIR COMPRESSORS, furnished, if required; the latter with GIFFARD'S FRICTIONLESS VALVE PISTON.

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AND 5, RUE SCRIBE, PARIS.
Circulars sent free.

N.B.—McKEAN and Co. are sole agents for M. GIFFARD'S FRICTIONLESS VALVE PISTON, for Pumps, Air Compressors, &c., giving a larger percentage of yield than any other system.

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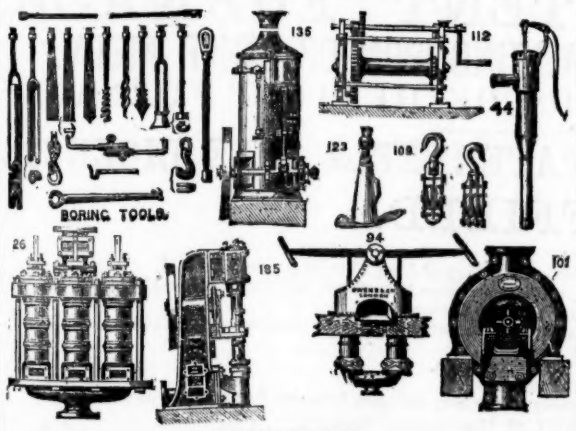

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TURBINES, WATER WHEELS, WIND ENGINES,
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£650,000 have been paid as compensation—
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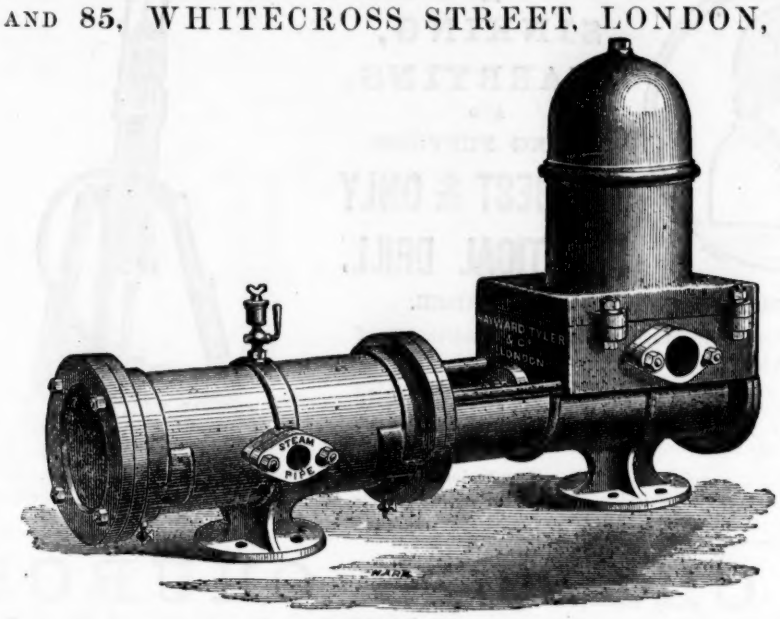
WILLIAM J. VIAN, Secretary.

THE PATENT "UNIVERSAL" STEAM PUMP,

SOLE MAKERS,
HAYWARD TYLER AND CO.,
84 AND 85, WHITECROSS STREET, LONDON, E.C.



TESTIMONIALS.

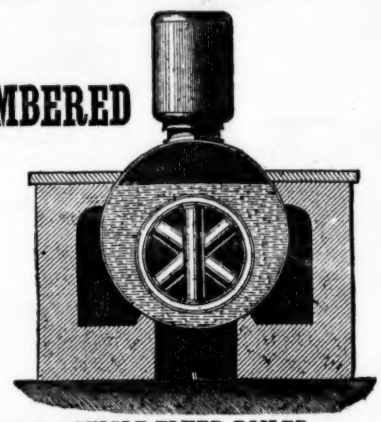
Tottenham Local Board of Health, Tottenham, 12th December, 1870.
GENTLEMEN,—I have much pleasure in informing you that your Steam Pump proved itself to be one of the most useful machines for raising water that I have ever seen. It was driven night and day for nearly three months without a single hitch. The construction of the pump is so simple that any person can be taught to open it, and replace or clear the valves. I have seen no engine at all to be compared with it for mines, coal pits, or small water-works.
I am, Gentleman, faithfully yours, (Signed) P. P. MARSHALL, C.E., Surveyor.
Messrs. HAYWARD TYLER and Co., London.

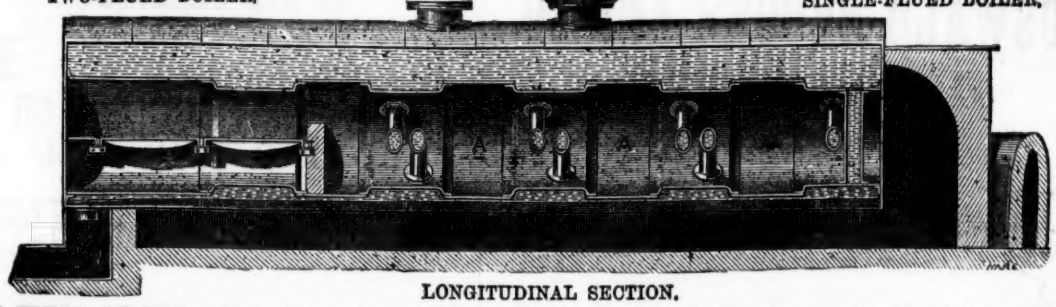
Aston Main Coal Company, near Sheffield, 1st December, 1871.
To Messrs. HAYWARD TYLER and Co., 84, Upper Whitecross-street, London.
GENTLEMEN,—In answer to your enquiry, I beg to state that the two "Universal" Pumps supplied to us (through your agent, Mr. T. A. Ashton) are doing our work exceedingly well; we think they are the best in the market, and shall be glad if you will send us another 9-in. cylinder 6-in. pump, one week from this date.
Yours truly, (Signed) ASTON MAIN COAL COMPANY.

Extract of a Letter from JOHN SIMPSON, Esq., to Hayward Tyler and Co.'s Agent.
Rhos Llantwitt Colliery, Cuerphilly, near Cardiff, March 4, 1872.
I should like to have the water-piston and clacks the same as in our present pump, as they work exceedingly well, and I do not think it is possible to improve upon the present pump, except by lining the cylinder with brass es ordered. (Signed) JOHN SIMPSON.

HAWKSLEY, WILD, AND CO.'S
PATENT
FLANGED & COMBUSTION-CHAMBERED
FLUED
BOILERS.

TWO-FLUED BOILER.


SINGLE-FLUED BOILER.


LONGITUDINAL SECTION.

THE FLUES OF THE ABOVE BOILERS ARE MADE OF TWO DIAMETERS, ONE RING OF PLATES BEING 4 inches less than the other, alternately.
The smaller rings being flanged, as shown in drawing, are thereby considerably strengthened, besides securing the most material point—a perfect EXPANSION-JOINT.
The cross tubes are placed in the smaller rings of the flue, so that any one can easily be taken out and replaced.
The larger rings of the flue act as reverberating, combustion, and heat-retaining chambers, greatly economising the fuel.
These Boilers are strong, durable, and economical, and have been at work a number of years with the most satisfactory results.

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THE HOWARD SAFETY BOILER,
HUNDREDS ARE NOW IN USE, AND THE DEMAND IS UNPRECEDENTED.
Some of its advantages:—
NOT LIABLE TO DANGEROUS EXPLOSIONS.
HIGH-PRESSURE STEAM, WITH ECONOMY OF FUEL.
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SAVING OF COST AND TIME IN REPAIRS.
PORTABILITY, AND, FOR EXPORT, GREAT SAVING IN FREIGHT.

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Specially Applicable
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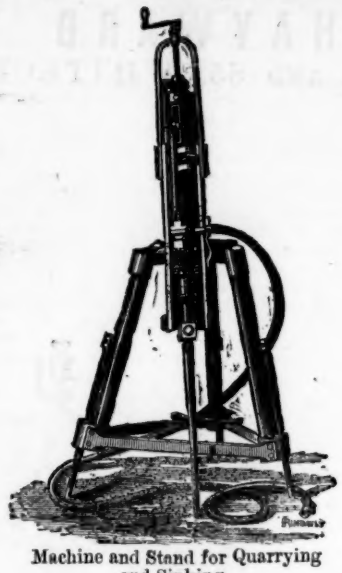
THE BEST & ONLY PRACTICAL DRILL.

IT DOES NOT GET OUT OF ORDER.

PROGRESSES through Aberdeen granite at the incredible rate of 10 inches per minute.

SAVES £5 a day as compared with hand labour, independent of the enormous saving effected in the general expense, such as PUMPING, VENTILATION, INTEREST OF CAPITAL, &c., from the fact of the "put out" being increased four-fold.

DRILL POINTS.—The saving in steel alone is considerable. One drill will go through 20 feet of Aberdeen granite without sharpening.



Machine and Stand for Quarrying and Sinking.

PRIZE MEDALS:

Royal Cornwall Polytechnic Society, August 21, 1872.

Liverpool and Manchester Agricultural Show, Sept. 12, 1872.

Middleton Agricultural Show, Sept. 18, 1872.

THOMAS BROWN,
PATENTEE AND SOLE PROPRIETOR.

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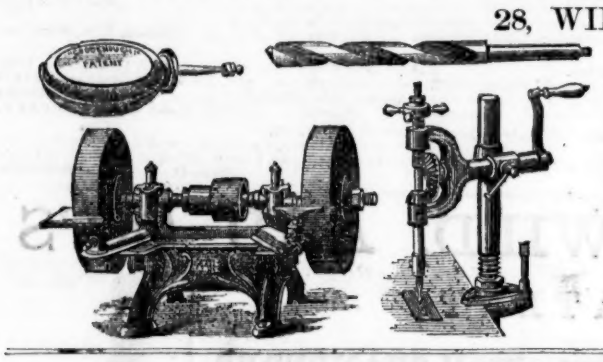

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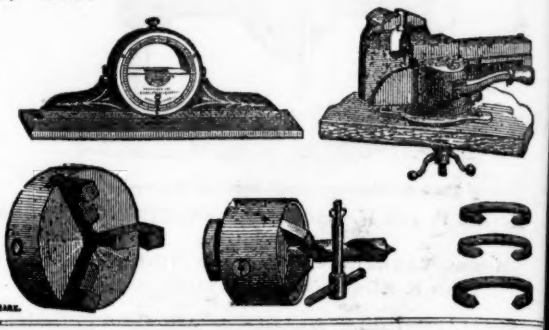

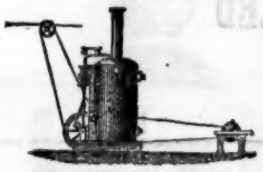

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The ORIGINAL combined Vertical Engines and Boilers, introduced by Mr. CHAPLIN in 1855. Each class kept in Stock for Sale or Hire.

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WORKS: REGENT'S PLACE, COMMERCIAL ROAD EAST, LONDON, E.
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Having purchased from the Trustee of the late Firm of W. Charles and Co. the extensive works, with the valuable and improved machinery, are prepared to execute orders for every description of
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BY HER MAJESTY'S ROYAL LETTERS PATENT.

STANLEY'S PATENT FURNACE,
FOR SMELTING ORE OR RE-MELTING IRON OR OTHER METAL,
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2ndly, The use and expense of grate-bars are dispensed with, as these furnaces have closed fire-places, formed in brickwork.
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5thly, The workmen have much less labour in working these furnaces.
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8thly, The mills and workshops are cooler and more comfortable than where the open fire-grate furnaces are used.
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A LARGE STOCK OF SECOND HAND RAILS AND PLANT ALWAYS ON HAND.

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AS SUPPLIED TO H.M. DOCKYARDS AND FLEET.

THIS OIL is suitable to every kind of Machinery. As a lubricant it is equal to the best Sperm or Lard Oil, while it possesses the great advantage of being entirely free from any principle which will corrode the metal bearings.

For particular kinds of Machinery, the Oil may be specially prepared of a consistency and character adapted to the nature of the work to be done.

"Chemical Laboratory, 7, Printing House-square, Blackfriars, April, 1863.

"I herewith certify that the Rangoon Engine Oil, manufactured by Messrs. Chas. Price and Co., is free from any material which can produce corrosion of the metal work of machinery. It is indeed calculated to protect metallic surfaces from oxidation.

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"T. W. KEATES, F.C.S., &c. &c.

Every parcel of the Oil sent from the work bears the Trade Mark of the Firm.

LONDON: CASTLE BAYNARD, UPPER THAMES STREET.
WORKS: MILLWALL, POPLAR; and ERITH, KENT

Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, 26, FLEET STREET, E.C., where all communications are requested to be addressed.—*Dec. 7, 1872.*

SUPPLEMENT.

THE MINING JOURNAL,

Railway and Commercial Gazette.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

EXTRACTS FROM DICKER'S "AUSTRALIAN & LONDON GAZETTE."

LONDON, SATURDAY, DECEMBER 7, 1872.

GOLD AND THE GOLD-FIELDS.

—o—

No very special matters of importance have occurred in connection with the gold-mining industry in this colony during the past month, but the position of the industry generally is most satisfactory, the excellent yields which have been obtained during the past two years being well kept up, and quartz mining having been still further extended. In the early part of the month some hundreds of experienced miners left Melbourne for Charters Towers, in Queensland, notwithstanding sufficient warnings from the press that there was no trustworthy information to justify them in rushing to a supposed new diggings at so great a distance from Victoria and at so great an expense to themselves; but the news which came by telegram during the month from Queensland was of so discouraging a nature as to stop any farther migration from here, and induce those who were seriously bent on going to the supposed new rich gold fields to settle down to work again in the various districts of this colony.

The Sandhurst quartz mines still continue to attract the most attention of any of the Victorian mines, and the dulness which had fallen on the mining market about five or six weeks ago through the partial failure of the magnificent yields furnished by the Hustler's Tribute Company No. 1 for the previous nine or ten months, but more especially through over speculation in the share market, and a too great eagerness to prospect for new reefs in the Sandhurst district, has almost passed away. There seems now to have been no grounds for any misgivings as to the value of the Sandhurst reefs. The yields from them have been kept up splendidly and continue to improve. The Great Extended Hustler's Company, of which the tribute mentioned above is an off-shoot, have been especially successful, their yields improving at a rate which, if kept up, will shortly make them equal to the unparalleled returns which their tribute company gave during the first half of this year. Their fortnight's yield for the term ending 14th September was 1532 oz., and for the next fortnight it was no less than 1629 oz. The tribute company's yield for the last fortnight has also improved to 545 oz., from 314 oz. in the preceding fortnight, and they have the prospect before them of again striking as rich a run of stone as that which recently proved so valuable. Another company in the same district, the New Chum and Bellevue Railway Reserve, has also come prominently forward during the past month or two, the yield from their mine for the fortnight ending September 16 being 859 oz., and for that ending October 5, 1074 oz. There are many other mines which have given excellent returns that still continue to do so, and it is seldom that many weeks pass over without fresh lines of reef being proved to be of a profitable nature. Only within the last few days the mines on the Carshalton line of reef have considerably improved in public estimation, owing to the prospects shown by some of the mines on the line, and business has been done in claims upon it extending to one mile in length. The local correspondent of *The Argus*, in last Saturday's report, speaking of Sandhurst, says:—"Mining matters at present, as far as this district is concerned, wear a most prosperous aspect; new discoveries of payable stone are of almost daily occurrence, and these are by no means confined to one line of reef, but are in all parts. The returns of gold coming to hand far exceed those of some time past, if we except the Great Extended Hustler's Tribute; and before the close of the year the yields will be the means of adding very considerably to the dividend list, which, it is not unlikely, will almost double the amount paid last year."

At Ballarat proper, although alluvial mining in the deep claims there continues to be somewhat dull, a good deal of attention is being attracted by the discovery of many exceedingly rich small veins of quartz in the Black-hill and South Black-hill mines. It is, however, very expensive to follow these small veins, in consequence of the stone in which they are embedded being very hard to work; but it is alleged that the veins run into larger lodes deeper in the earth, though as yet none of them have been traced properly to such lodes. In conjunction with these small veins some very gratifying intelligence has come from the Queen Victoria and the Sovereign mines, which are situate little more than a mile south of the Black-hill. In them lodes of great size have been found, and in the Queen Victoria at the present time a quartz lode is being worked at about the 220ft. level, said to be 30ft. thick and to show fair gold; while the Sovereign's eastern drive at the 570ft. level is into a great body of stone that they cannot open into well till they get the pumping-engine ready to keep the mine free of water. With these big lodes in the two mines named at good depths, and the higher workings of the small veins in the Black-hill and Black-hill South mines, there should be an opportunity for some competent geologist or mineralogist to inspect and report on the lodes in that part of Ballarat at any rate, if in no other. The Queen Victoria Company have, according to the report of the directors at the last general meeting, very much improved their position by the increased and better appliances introduced at the mine. The stone is poor, the average from 9031 tons being but 2 dwt. 14½ gr.; but with this low return they appear to have been able to pay dividends equal to 1*s*. 3*d*. per share per month, though the money was mostly devoted to the liquidation of the company's debts, while the tributers were able to average 2*l*. 4*s*. 6*d*. per man per week. This improvement is attributed to three causes; first, the great size and friable nature of the lodes; second, the increase of crushing power from 20 to 30 heads of stamps; and third, the improved pumping arrangements, which give the company control of an unlimited supply of water. The success of the Queen Victoria Company should hold out great inducements to other companies on the same line of reefs to follow their example in the matter of good management, for on that chiefly will success depend where quartz or wash-dirt is poor. There have been one or two new discoveries reported during the past week as having been made in Ballarat or some of its numerous subdivisions, which may lead up to important results, but as there are no official accounts of any of them, they can only be spoken of from rumour. The first of these discoveries is a new make of stone, or a new reef, in the south end of the claim of Mr. Learmonth, at Egerton, which shows in some places splendid gold, and which is as much as 15ft. to 18ft. thick. Groping about in the dark, without any guide as to what was likely to be found, the men came on this treasure, and it is another proof of how little is known, and how much has to be learned, before any one can speak with the least confidence as to the depth from the surface or the position in which any quartz lodes may be found, or of their probable value or direction after they are discovered. Another is the discovery by the Koh-i-noor Company of good reef-wash at an elevation which corresponds to that at which it should be found under Mr. Serjeant's theory of high reef-washes. Another is the improved appearance of the lodes in the Albion mine, at Steiglitz, which, taken in connection with the lodes now opened up by the Dividend Quartz Company, those at Elaine and at Ballan and Lal Lal, is considered to be of much importance. The striking of new, and what promises to be rich gutters in some of the Smythesdale mines is likely to draw a good deal of attention to the Pitfield Plains district before long, and to cause the investment of some capital there; while at Creswick the search for the deep and the shallow gutters is prosecuted with vigour by all the parties who are interested.

Great activity is being evinced in the development of the numerous mines in the various divisions of the Castlemaine district, the success which has attended individual efforts having given a much greater feeling of confidence in the mines in those parts. The reports from the other mining districts of the colony are also favourable, more especially with reference to quartz reefing; and the new discoveries of reefs which are constantly being made, almost, if not altogether, justify the opinion that gold-mining is yet little beyond its infancy in Victoria, and that not a tithe of the treasures buried under its surface have been extracted.—*Melbourne Argus*.

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

Rowe Brothers Gold Mining Company, Limited, Golden Gully, Fryer's Creek, near Castlemaine, Victoria, Australia.

Capital 100,000*l.*, in 50,000 Shares of 2*l.* each.

40,000 Shares allotted in the Colony (including 10,000 to the Vendors as part purchase money).

10,000 Shares offered in the London market.

Thomas Dicker, Esq.

(Australian and London Mining and General Agency),

Agent for the Company in London, is authorized to receive forthwith applications for the above parcel of 10,000 Shares:—

5*s.* per Share to be paid on Application; 15*s.* on Allotment; and 20*s.* in One Month after Allotment. Cheques to be crossed City Bank, Threadneedle Street.

Directors.

Hon. C. J. Jenner, Member of the Legislative Council, Victoria.

Francis Bell, Esq. (Bell, Bruce, and Co., Merchants), Melbourne.

A. F. Wileman, Esq., C.E., Sydenham Villa, St. Kilda, Victoria.

Hannibal Orchard Rowe, Esq., Fryer's Creek, Castlemaine, Victoria, Australia.

Solicitor.

H. J. Farmer, Esq., Collins Street, Melbourne.

Bankers in the Colony.

The London Chartered Bank of Australia.

Brokers in the Colony.

Messrs. Willder and Sterne, Collins Street West, Melbourne.

London Agent.

Thomas Dicker, Esq.

London Office.

4, Royal Exchange Avenue, E.C.

All profits from the Mine subsequent to the 14th August ult. are credited to this Company.

The Mine is looking as well, if not better, at the present time than at any former period.

Dividends to English Shareholders will be paid at the London Office of the Company, as above.

A cable message from Melbourne was received by the London Agent last week (November 22nd), informing him that the accrued profits to the end of January next will amount to 10,000*l.*

The object of this Company is to purchase and work upon a more extensive scale, ROWE BROTHERS' Claim, Fryer's Creek, Victoria, which is one of the most productive gold mines in the colony, and *facile princeps*, the richest in the whole of the Castlemaine district. The reputation of this property is almost too well known to need remark; but in further corroboration of its value there are the published reports and testimony of—

Messrs. Mark Amos, the Government Mining Surveyor, Fryer's Creek Division.

Charles Kinnear, the original lessee and projector of the Clunes Mines (Port Phillip and Colonial Gold Mining Company), the profits of which, including Royalty, have reached 322,926*l.*, upon an original outlay of less than 20,000*l.*

The Special Reporter of the *Melbourne Argus*.

The Special Reporter of the *Bendigo Advertiser*.

And the CERTIFIED MONTHLY BANK RETURNS OF GOLD from the Mine.

The ROWES are, in fact, three Cornish working miners, who, assisted by their respective families only, have hitherto wrought the Mine themselves; but being advanced in years, and having made handsome fortunes, they wish to realize and place the Mine in the hands of a Company before returning to England; and to show their confidence in a continuance of its prosperity, they are desirous of retaining a large proportion of their interest in shares. Apart from this, it is no secret that they do not possess the business aptitude to conduct a commercial undertaking (for such it may be called) upon the extensive scale the property admits of.

The Claim is 9a. 3r. 1p. in extent, in addition to which valuable reservoir, machinery, and tailings sites, have been secured, making in all about 15 acres. Five named reefs run through the ground, and two new ones have been discovered since the month of February, 1872. The length of the Western reefs is 546 feet, and the Eastern 684 feet. The main lode of quartz varies in width from 70 feet to 120 feet, the whole containing gold in paying quantities.

The Mine has been opened up in a rude manner to the shallow depth of only 160 feet. All the levels are in auriferous quartz, and the yield has always averaged 15 dwt. per ton, but as much as 2½oz. per ton has been obtained. 15 dwt. of gold is worth 2*l.* 7*s.* 6*d.*; and as the average cost of obtaining this result is only 13*s.*, the margin of profit is very great, especially when it is remembered that there is no machinery on the ground, except a small second-hand winding engine, and all the quartz has to be carted two miles over bad country to the crushing battery. This, however, will be obviated, as the new crushing machinery will be erected close to the Mine. The adjoining companies are raising good quartz from much greater depths at each end. Thus proving the value of the reef in depth.

The first shaft was sunk nine years ago, and the subsidiary reefs driven on, but the big lode was only discovered about two years ago. Since then the reef has been opened up in depth, and the quartz taken out of the levels alone has been sufficient to pay handsome dividends. Stoping or breaking out the quartz from the roof of the levels, upwards, yet remains to be done.

Even at the present time, with mining operations carried on, so to speak, against all light and knowledge, the profits are equivalent to about 15 *per cent. per annum upon the capital of* 100,000*l. But with the greatly increased facilities, to be added forthwith, it is estimated these profits will be increased at least fourfold.*

The purchase-money of the property is 90,000*l.*; the original owners taking 20,000*l.* of the purchase-money in Shares. The balance of 10,000*l.* (ample for the purpose) will be placed to the credit of the Company, to cover the erection of additional machinery, including 60 head of stamps, and the construction of a reservoir sufficient to provide an abundant supply of water all the year round.

During the erection of the new plant, which will occupy from three to four months, the profits accruing from a continuance of the present mode of working will enable the Directors to declare satisfactory dividends in the mean time.

To enable a correct opinion to be formed of the capability of the Mine for extensive operations, the following statements in the reports should be noted.

The GOVERNMENT SURVEYOR estimates the quantity of quartz standing between the surface and 113 feet in depth at 399,860 tons, and to 400 feet at 806,760 tons.

The first-named quantity, viz., 399,860 tons, would give uninterrupted employment for 60 heads of stamps for at least twelve years.

The *ARGUS* SPECIAL REPORTER upon this point says:—

"At 40 feet from the surface, at 70 feet, and at 100 feet, there are immense bodies of auriferous stone. There are also some workings at intermediate depths, and for anything that is yet known, the Mine may be profitably worked to a depth of 1000 feet.

"At the lowest level yet opened out the lode is 120 feet thick. In traversing the various drives and galleries by which the Mine is worked, a stranger is forcibly struck by the extent of available stone which it contains. Huge masses of white, red, or brown quartz are everywhere visible, with a considerable intermixture of decomposed schist, and nearly everywhere gold is to be seen. Though the claim is only nine or ten acres in extent, the lives of its present owners would not suffice to exhaust its treasures, if it continued to be worked at the present rate; for, to tell the truth about it, it has not been managed with much spirit. It is too big a thing for the ROWES. It has grown under their hands, and they have never adapted their system or management to its extent and value. Consequently, they work under many disadvantages. Their shaft is too narrow and their drives are tortuous and low in the roof, while their crushing battery is a mile and a half from their Mine. But when all this has been said, it has still to be admitted that they have one of the most valuable mining properties in the colony, and deserve to have it, since it is the result of their own industry and perseverance."

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

MR. KINNEAR also says:—

"There are five named reefs in the ground: in fact, the greater part of the hill appears composed of auriferous quartz veins, the portion mined by the Messrs. ROWE bearing a very small proportion to the whole. They have simply driven a few levels and crosscuts, merely serving to *indicate rather than develop the extent and value of the lodes;* beyond this no work has been done in the Mine worth naming. The above works must be considered initiatory only. Nor is there any indication that the stone removed may have been of a better quality than that which remains. The Bank will, I assume, give the actual value of the gold obtained, but as collateral evidence of the uniform value of the quartz (allowing for the refuse and soil used in filling up) not one hundredweight of the stone hitherto raised remains on the surface uncrushed, notwithstanding their having to cart it one mile and a half to the battery over very difficult ground; these two facts, in conjunction with the foregoing, struck me as bearing most unequivocal testimony to the value of the venture. *In almost every portion of the Mine I saw gold in situ.*"

In fact, the Mine is in most respects very similar in character to the celebrated Great Extended Hustler's Reef Mine, Bendigo, the market value of which at the present moment stands between a quarter and half a million sterling. A tribute company alone, in connection with this latter Mine, the Extended Hustler's, started in January, 1871, with a capital of 700*l.*, has since paid in dividends 96,000*l.*

Other Victorian mines still returning well may be mentioned, such as—

The New North Clunes, paid up 45,000*l.*; paid in dividends 207,306*l.* since 3rd August, 1868.

Walhalla, paid up 15,000*l.*; paid in dividends 116,878*l.*

Cornish Company, paid up 2*l.* 7*s.* 6*d.* per share; paid in dividends 154*l.* 10*s.* per share.

Nineteen of the most productive Victorian mines still at work, with a nominal capital of 402,899*l.*, have paid already 1,459,212*l.* in dividends.

The above-mentioned reports, copies of which may be obtained of the London Agent, afford the fullest and most conclusive information as to the great value of the property.

For Prospectuses, Forms of Application, &c., apply to the London Agent, at the Office of the Company, 4, Royal Exchange Avenue, where may be also seen exceedingly rich specimens of the ore from this Mine, and elaborate plans of the property.

MEMORANDA. — AUTHENTIC PARTICULARS OF ROWE BROS. MINE, FRYER'S CREEK, VICTORIA.

Extracts from the Report of Mark Amos, Esq., the Government Surveyor for the Fryer's Creek Division.

QUARTZ LYING BETWEEN SURFACE AND 113 FEET DEEP—THE WINDING ENGINE SHAFT.

	In Length.	Average Width.	Estimated Depth.	Tons.
The Western Lode	546 feet	5 feet	60 feet	12,000
The Main Lode	684 ,,	75 ,,	70 ,,	266,260
The Eastern Lode	684 ,,	40 ,,	60 ,,	121,600

In computing the above, I believe I have gone far beneath the actual quantities to reduce to this level, making due allowance for slate and sandstone that may be non-auriferous, and cast aside.

STONE ESTIMATED TO DEPTH OF 400 FEET, BEING 287 FEET BELOW THE PRESENT WORKINGS.

	In Length.	Average Width.	Tons.
The Western Lode	546 feet	5 feet	58,000
The Main Lode	684 ,,	16 ,,	232,600
The Eastern Lode	684 ,,	8 ,,	116,300
The total to these depths			806,760

Estimated cost of reducing, I think, may be fairly taken at nine (9) *shillings per ton, so that by crushing* 600 *tons weekly, with an average yield of* 15 *dwt. per ton, a profit of* 1530*l. ensues; by yield of an ounce per ton,* 2130*l. weekly accrues, or* 110,760*l. per annum.*

SUGGESTED PLANT, ETC.

It is very evident that the main body of stone runs easterly, even far from your most extreme workings at level attained (113 feet). I would suggest the sinking of a main shaft upon the brow of the hill to a depth of 400 feet; from 200 feet level, cross-cuts should be made at 50 feet levels *both* EAST *and* WEST, as not only would the now well-proved reefs that you have westerly from such shaft, but by the eastern cross-cuts undoubtedly Ferron's Reef would be struck at no great distance, as it underlies westerly.

I would suggest the erection of a battery of 60 heads of stamps, with engine capable of working 100 heads, and house to receive such when deemed necessary.

Whilst the main shaft is being sunk and machinery erected, the present workings could be carried on, good dividends accruing whilst the Mine would be systematically opened out.

THE MACHINERY SITE.

Situate about 7 chains east of your workings; a fair fall to the main road exists, and a tramway can cross the same to the point of delivery in passes at battery.

SUPPLY OF WATER.

This is a most important feature in connection with any mine similar to yours, where large bodies of stone, &c., have to be reduced. I consider your water storage will be ample to supply an engine and battery of 60 heads without intermission, and there is sufficient fall from the outlet at reservoir to feed the boiler without pumping, which is often a great consideration and expense.

NEW RESERVOIR SITE.

This contains an area of 4a. or. op., and is situate 22 chains from your workings, a main road connecting the points. The capacity is about 4 million gallons; this is computed by the erection of embankment, as shown upon plan of grant, a height of 5 feet above high water and overflow being given, and 10 feet to the crown of the road. The situation is one of the most favourable in this locality, having the whole watershed of Fryer's Creek to the Dividing Range easterly, so that a never-failing supply of water may be relied upon. I estimate the total cost of dam at 600*l.*, this including valve-staging and gearing, and pipes to the machinery site.

January 25, 1872.

Extracts from the Report of the Special Reporter of the "Melbourne Argus."

It is there that the greatest excitement prevails, and the now celebrated claim is its chief centre. Consequently nothing was to be done until this Mine was visited and examined. What I saw there I shall now relate, passing over for the present some interesting sights that I saw on the way to the Creek. Descending a somewhat steep declivity, the little town comes suddenly into view, with its group of productive quartz mines, clustered somewhat closely together, and a long line of progress claims extending to the northward as far as the eye can see. The little township occupies a pretty basin, and is surrounded on all sides by ranges of quartz hills well clothed with vigorous saplings. Among all the mines that first catch the eye of the visitor, that of the Brothers is the most unpretending in appearance, and if it were possible for a property, which has long yielded 400*l.* a week of clear profit, to look mean, I should use that word in describing it. A shabby wooden house accommodates a little winding-engine, and there is a rude apparatus by means of which the stone raised is put into drays for conveyance to the company's battery, a mile and a half up the reef. That is all that is visible above ground, and the sight of it is not impressive. But there is a good deal to see underground—so much, in short, as to justify the high price at which the Mine is to be sold.

At 40 feet from the surface, at 70 feet, and at 100 feet, there are immense bodies of auriferous stone. There are also some workings at intermediate depths, and for anything that is yet known the Mine may be profitably worked to a depth of 1000 feet. At the lowest level yet opened out the lode is 120 feet thick. In traversing the various drives and galleries by which the Mine is worked, a stranger is forcibly struck by the extent of available stone which it contains. Huge masses of white, red, or brown quartz are everywhere visible, with a considerable intermixture of decomposed schist, and nearly everywhere gold is to be seen.

Though the claim is only nine or ten acres in extent, the lives of its present owners would not suffice to exhaust its treasures, if it continued to be worked at the present rate; for, to tell the truth about it, it has not been managed with much spirit. It is too big a thing for the Rowe Brothers. It has grown under their hands, and they have never adapted their system or management to its extent and value. Consequently, they work under many

(*Continued on page* 7.)

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE.

SATURDAY, DECEMBER 7, 1872.

LIST of the PRINCIPAL DIVIDENDS PAID in VICTORIA DURING the MONTH ending AUGUST 10, 1872.

ALLUVIAL.

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Albion Consols, Ballarat	0 3 0	July 20	2,000	300 0 0
Argyle, Linton's	0 2 6	Aug. 3	3,200	400 0 0
Band and Albion Consols, Ballarat ...	0 4 0	July 20	22,450	4,490 0 0
Band of Hope, Maryborough	0 2 0	„ 27	6,000	600 0 0
	0 2 0	Aug. 10		600 0 0
Galatea, Scarsdale	0 5 0	„ 3	2,100	525 0 0
Gladstone, Maryborough	0 1 6	July 20	6,000	300 0 0
	0 1 0	Aug. 3		300 0 0
Golden Lake, Springdallah	0 5 0	July 20	4,400	1,100 0 0
Golden Stream, Scarsdale	0 10 0	Aug. 3	2,000	1,000 0 0
Gravel Pits, Ballarat	0 5 0	July 20	1,100	275 0 0
Haddon, Haddon...	2 0 0	„ 20	64	128 0 0
	3 0 0	Aug. 3		192 0 0
John Bright, Maryborough	0 5 0	July 27	6,000	1,500 0 0
	0 2 0	Aug. 10		600 0 0
Seaham, Maryborough	0 2 0	July 27	6,000	600 0 0
	0 3 0	Aug. 10		900 0 0
Telegraph, Huntly	0 0 5	„ 10	24,000	500 0 0
Try-Again, Smythesdale	13 0 0	July 27	23	299 0 0
				£14,609 0 0

QUARTZ.

	£ s. d.			£ s. d.
Alabama, Sandhurst	37 4 0	July 27	10	372 0 0
Bellevue, Sandhurst	0 0 1	„ 20	24,000	100 0 0
C. C. Freehold Tribute, Sandhurst ...	0 0 3	Aug. 10	24,000	300 0 0
Champion, Sandhurst	0 0 2	„ 3	24,000	200 0 0
Cornish, Daylesford	0 5 0	July 27	1,300	325 0 0
	0 5 0	Aug. 10		325 0 0
Eastwood's Quartz, Sandhurst... ...	5 0 0	July 27	24	120 0 0
Glengonner, Lauriston	0 2 0	„ 20	2,000	200 0 0
	0 2 6	Aug. 3		250 0 0
Golden Fleece, Sandhurst	0 0 6	„ 3	24,000	500 0 0
Great Extended Hustler's Reef, Sandhurst	0 2 6	July 27	28,000	3,500 0 0
	0 2 6	Aug. 10		3,500 0 0
Great Extended Hustler's Tribute, Sandhurst...	0 3 6	July 20	28,000	4,400 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst...	0 2 0	Aug. 3	28,000	2,800 0 0
Liverpool Tribute, Sandhurst	0 0 3	July 20	24,000	300 0 0
Long Tunnel, Stringer's Creek ...	3 0 0	Aug. 10	2,400	7,200 0 0
Morning Star, Blackwood	110 0 0	July 27	4	440 0 0
New Caledonian, Castlemaine	0 1 6	Aug. 3	24,000	1,800 0 0
New Chum & Belle Vue Railway Reserve, Sandhurst	0 0 9	July 20	28,000	1,050 0 0
	0 1 0	Aug. 3		1,400 0 0
New North Clunes, Clunes	1 0 0	July 27	2,056	2,056 0 0
North Cross Reef, Pleasant Creek ...	0 16 0	„ 20	10,000	8,000 0 0
	1 0 0	Aug. 3		10,000 0 0
North Fear-Not, Daylesford	0 0 3	July 20	24,000	300 0 0
North Johnson's, Sandhurst	0 0 6	Aug. 10	22,000	550 0 0
Old Chum, Sandhurst	0 1 0	„ 3	27,000	1,350 0 0
Pandora, Sandhurst	0 1 0	July 20	28,000	1,400 0 0
St. Mungo, Sandhurst	0 0 6	„ 27	24,000	600 0 0
Specimen, Jamieson	0 0 10	Aug. 10	48,000	2,000 0 0
Speculation, Maldon	0 1 0	„ 10	2,400	120 0 0
Troubadour Tribute, Maldon	0 0 6	„ 10	32,000	800 0 0
Union, Diamond Creek	0 0 3	„ 3	20,000	250 0 0
	0 0 3	„ 10		250 0 0
Victoria, Llanelly...	0 0 6	„ 10	6,000	150 0 0
Victoria Reef Gold Mines, Sandhurst...	0 1 0	„ 3	20,274	1,013 14 0
				£58,421 14 0
Dividends paid by Alluvial Mining Companies				14,609 0 0
„ „ „ Quartz „ „				58,421 14 0
				£73,030 14 0

DURING the MONTH ending SEPTEMBER 7, 1872.

ALLUVIAL.

	£ s. d.			£ s. d.
Alma Consols, Maryborough	0 2 0	Sept. 7	6,000	600 0 0
Band of Hope, Maryborough	0 1 0	Aug. 24	6,000	300 0 0
	0 3 0	„ 31		900 0 0
Bute, Smythesdale	4 0 0	„ 17	40	160 0 0
Galatea, Scarsdale	0 5 0	„ 31	2,100	525 0 0
Gladstone, Maryborough	0 1 0	„ 17	6,000	300 0 0
Gladstone, Smythesdale...	4 10 0	Sept. 7	10	45 0 0
Golden Lake, Springdallah	0 5 0	Aug. 24	4,400	1,100 0 0
Golden Stream, Smythesdale	0 5 0	Sept. 7	2,000	500 0 0
Haddon, Haddon...	3 0 0	Aug. 17	64	192 0 0
	2 0 0	„ 31		128 0 0
John Bright, Maryborough	0 1 0	„ 24	6,000	300 0 0
	0 2 0	Sept. 7		600 0 0
Little Stream, Smythesdale	15 0 0	„ 7	14	210 0 0
Queen, Maryborough	0 1 0	Aug. 24	6,000	300 0 0
Seaham, Maryborough	0 3 0	„ 24	6,000	900 0 0
	0 2 0	Sept. 7		600 0 0
Tommy Dodd, Malmsbury	0 0 6	Aug. 31	10,000	250 0 0
Try-Again, Smythesdale	12 0 0	„ 24	23	276 0 0
	8 0 0	Sept. 7		184 0 0
				£8,370 0 0

QUARTZ.

	£ s. d.			£ s. d.
Alabama, Sandhurst	43 8 0	Aug. 24	10	414 0 0
Band and Albion Consols, Ballarat ...	0 5 0	„ 17	22,450	5,612 10 0
Clunes Freehold, Clunes	0 0 9	Sept. 7	2,000	75 0 0
Cornish, Daylesford	0 5 0	„ 7	1,300	325 0 0
Eastwood's Quartz, Sandhurst... ...	4 0 0	Aug. 31	24	96 0 0
G. G. Consolidated, Sandhurst ...	0 0 6	„ 17	49,000	1,225 0 0
Glengonner, Lauriston	0 2 0	„ 17	2,000	200 0 0
	0 3 0	„ 31		300 0 0
Golden Fleece, Sandhurst	0 1 0	„ 31	20,000	1,000 0 0
Great Extended Hustler's, Sandhurst	0 3 0	„ 24	28,000	4,200 0 0
	0 3 0	Sept. 7		4,200 0 0
Great Extended Hustler's Tribute, Sandhurst	0 2 0	Aug. 17	28,000	2,800 0 0
Ironbark, Sandhurst	0 1 0	„ 24	9,000	450 0 0
Kitto's Tribute, Sandhurst	0 0 2	Sept. 7	24,000	200 0 0
Lazarus New Chum, Sandhurst ...	0 0 6	Aug. 24	45,000	1,125 0 0
Lazarus New Chum, No. 1, Sandhurst	0 0 6	„ 31	45,000	1,125 0 0
New Caledonia, Castlemaine	0 1 6	„ 31	24,000	1,800 0 0
New Chum and Belle Vue Railway Reserve, Sandhurst	0 1 3	„ 17	28,000	1,750 0 0
	0 1 0	„ 31		1,400 0 0
North Cross Reef, Pleasant Creek ...	0 18 0	„ 31	10,000	9,000 0 0
*New North Clunes, Clunes	1 0 0	„ 24	2,056	2,056 0 0
Do. do. do. Bonus	3 0 0	Sept. 7		6,168 0 0
*North Johnson's, Sandhurst	0 0 6	Aug. 24	22,000	550 0 0
	0 0 6	Sept. 7		550 0 0
North Star, Lauriston	0 0 6	„ 7	24,000	600 0 0
*Old Chum, Sandhurst	0 0 6	Aug. 17	27,000	675 0 0
	0 2 0	„ 31		2,700 0 0

QUARTZ—*continued.*

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Queen Victoria Canadians	0 1 6	„ 31	2,500	187 10 0
*Rose of Denmark, Sandhurst... ...	0 0 9	Sept. 7	24,000	900 0 0
Sadowa, Sandhurst	0 0 6	Aug. 17	24,000	600 0 0
*South New Moon Tribute, Sandhurst	0 0 3	Sept. 7	24,000	300 0 0
Union, Diamond Creek	0 0 3	Aug. 24	20,000	250 0 0
	0 0 3	Sept. 7		250 0 0
Venture, Jamieson	0 1 7½	„ 7	24,000	1,950 0 0
Victoria, Llanelly...	0 0 4	„ 7	24,000	400 0 0
*Victoria Reef Gold Mines, Sandhurst	0 1 0	Aug. 31	20,274	1,013 14 0
Walhalla, Gipps Land	1 0 0	„ 17	600	600 0 0
Young Man Friday, Sandhurst (final)	0 0 10½	Sept. 7	24,000	1,050 0 0
				£58,127 14 0
Dividends paid by Alluvial Mining Companies				£8,370 0 0
„ „ Quartz „ „				58,127 14 0
				£66,497 14 0

DURING the MONTH ending OCTOBER 5, 1872.

ALLUVIAL.

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Argyle, Linton's	0 2 6	Sept. 14	3,200	400 0 0
Band of Hope, Maryborough	0 6 0	„ 21	6,000	1,800 0 0
	0 2 6	Oct. 5		750 0 0
Band of Hope and Albion Consols, Ballarat	0 4 0	Sept. 14	22,450	4,490 0 0
Galatea, Scarsdale	0 5 0	„ 28	2,100	525 0 0
Gladstone, Maryborough	0 1 0	„ 14	6,000	300 0 0
	0 2 0	„ 28		600 0 0
Golden Lake, Springdallah	0 5 0	„ 21	4,400	1,100 0 0
Golden Stream, Scarsdale	0 7 6	Oct. 5	2,000	750 0 0
Haddon, Haddon...	2 10 0	Sept. 21	64	160 0 0
	2 10 0	„ 28		160 0 0
John Bright, Maryborough	0 1 0	„ 21	6,000	300 0 0
	0 2 0	Oct. 5		600 0 0
Little Stream, Smythesdale	9 0 0	„ 5	14	126 0 0
Morning Light Tribute, Sandhurst ...	0 0 2	Sept. 14	24,000	200 0 0
	0 0 3	„ 28		300 0 0
Queen, Maryborough	0 1 0	„ 14	6,000	300 0 0
	0 1 0	„ 28		300 0 0
Seaham, Maryborough	0 1 0	„ 21	6,000	300 0 0
	0 2 0	Oct. 5		600 0 0
Try Again, Smythesdale	21 0 0	Sept. 21	23	483 0 0
	11 0 0	Oct. 5		253 0 0
				£14,797 0 0

QUARTZ.

	£ s. d.			£ s. d.
Belmont Tribute, Sandhurst	0 0 1½	Oct. 5	24,000	150 0 0
Black Hill, Ballarat	0 3 0	Sept. 28	2,480	372 0 0
Carlisle, Sandhurst	350 0 0	„ 14	8	2,800 0 0
Carlisle (Approximate), Sandhurst ...	70 0 0	„ 21	24	1,680 0 0
Cornish, Daylesford	0 5 0	„ 21	1,300	325 0 0
	0 10 0	Oct. 5		650 0 0
Cornish United, Sandhurst	1 0 0	Sept. 14	800	800 0 0
Eastwood's Quartz, Sandhurst ...	4 10 0	„ 14	24	108 0 0
	3 0 0	„ 21		72 0 0
	3 10 0	Oct. 5		84 0 0
Empire, Sandhurst	0 0 6	Sept. 14	24,000	600 0 0
*Garden Gully United, Sandhurst ...	0 0 6	„ 21	26,422	660 11 0
Garden Gully United Tribute, Sandhurst	0 0 6	„ 21	23,750	593 15 0
Glengonner, Lauriston	0 2 0	„ 14	2,000	200 0 0
	0 2 6	„ 28		250 0 0
Golden Fleece, Sandhurst	0 1 0	„ 14	20,000	1,000 0 0
	0 1 0	„ 28		1,000 0 0
Golden Fleece Tribute, No. 2, Sandhurst	0 1 0	„ 28	24,000	1,200 0 0
Great Extended Hustler's Reef, Sandhurst	0 4 0	„ 21	28,000	5,600 0 0
	0 3 6	Oct. 5		4,900 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst	0 1 0	Sept. 14	28,000	1,400 0 0
Hattie Shepparde, Sandhurst	4 0 0	„ 14	16	64 0 0
Hibernia Reef, Sandhurst	3 10 0	„ 14	24	84 0 0
Imperial, Ballarat	0 10 0	„ 28	300	150 0 0
Kitto's Tribute, Sandhurst	0 0 3	Oct. 5	24,000	300 0 0
Lazarus New Chum, Sandhurst ...	0 0 6	Sept. 21	45,000	1,125 0 0
Long Tunnel, Stringer's Creek ...	1 10 0	„ 14	2,400	3,600 0 0
Morning Star, Blackwood	119 0 0	Oct. 5	4	476 0 0
New Caledonia, Castlemaine	0 1 0	Sept. 21	24,000	1,200 0 0
New Chum and Belle Vue Railway Reserve, Sandhurst	0 1 6	„ 14	28,000	2,100 0 0
	0 2 0	„ 28		2,800 0 0
*New North Clunes, Clunes	1 0 0	„ 21	2,056	2,056 0 0
North Cross Reef, Pleasant Creek ...	0 13 0	„ 28	10,000	6,500 0 0
North Garden Gully (Approximate), Sandhurst	130 0 0	„ 21	24	3,120 0 0
*North Johnson's, Sandhurst	0 0 6	„ 21	22,000	550 0 0
	0 0 6	Oct. 5		550 0 0
North Star, Lauriston	0 0 9	„ 5	24,000	900 0 0
*Old Chum, Sandhurst	0 1 0	Sept. 14	27,000	1,350 0 0
	0 1 6	„ 28		2,025 0 0
Passby (Approximate), Sandhurst ...	65 0 0	„ 21	24	1,560 0 0
Queen Victoria, Canadians	0 2 0	„ 28	2,500	250 0 0
*Rose of Denmark, Sandhurst... ...	0 0 6	Oct. 5	24,000	600 0 0
Tommy Dodd, Malmsbury	0 0 6	Sept. 14	10,000	250 0 0
	0 0 6	„ 28		250 0 0
TroubadourTribute (Eaglehawk Union Claim), Maldon	0 1 0	Oct. 5	32,000	1,600 0 0
Union, Diamond Creek...	0 0 3	Sept. 21	20,000	250 0 0
	0 0 3	Oct. 5		250 0 0
Walhalla, Stringer's Creek	2 0 0	Sept. 21	600	1,200 0 0
West Carshalton, Sandhurst	6 5 0	„ 14	24	150 0 0
Young Chum, Sandhurst ...	0 0 6	Oct. 5	20,000	500 0 0
				60,255 6 0
Dividends paid by Alluvial Mining Companies				14,797 0 0
„ „ Quartz „ „				60,255 6 0
				£75,052 6 0

* In these Companies the Australian and New Zealand Dividend Gold Mines Investment Company holds Shares.

VICTORIAN MINES.

WINTER'S FREEHOLD GOLD MINING COMPANY, *October* 10, 1872.—*Mine Report, No. 1 Shaft.*—I enclose you a copy of the report prepared by the mine manager for the general meeting, to be held to-morrow. The rise in the N.W. going up for the high reef struck rock at 107 feet, so we had to stop, construct a chamber, and drive until an opportunity presented itself for putting up a second rise. It was rather annoying to meet with rock, as we considered we were in the right position for meeting wash, but it seems there is a long point of reef (called the "Pinnacle" by our men) running down from the Hand and Band into our claim. It was met with in the north drive, and as it appeared narrow the manager thought the rise was far enough west to avoid it. A quartz reef, 10 feet thick, has been struck in our west drive, and from indications met with by the Hand and Band Company there

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

appears to be another gutter to the west of our northern workings, from whence we got such good returns two months ago. I am sorry the yield has been poor this month; however, there is every prospect of improvement next month. *Mine Manager's Report.*—I have the honour to submit the first quarterly report of mining operations carried on under my management. The main drive going out west is in a distance of 4300 feet from the shaft, 300 feet of this has been driven during the last three months. This drive is being carried on to enable us to reach the deep ground found to exist in the western part of the claim. We have lately cut a quartz reef in this drive, 10 feet wide, and expect to commence boring next week to prove the ground. At No. 6 rise the north drive has been driven 290 feet, and a shaft put up 107 feet, from which we are now driving to intersect the run of gold, which the Hand and Band Company are now following towards the boundary of your claim. A few weeks may prove something in this direction. I am also putting in a main drive to work the ground (some of which has been proved) in the north-eastern part of the claim, and towards the "Consols." *No. 1 Shaft.*—We will put up a rise in about six weeks, and I expect to find some paying ground here. To the south the drive has been pushed on with all possible speed, and we have driven 270 feet during the quarter. According to the bearing of the gutter in No. 3 Band and Albion, and which we expect to get here, we ought to be near now. We are putting up a bore, which will prove it shortly.

Gold Report—No. 1 Shaft.

1872.			oz.	dwt.
Sept.	11	Yield	13	3
,,	12	,,	12	0
,,	13	,,	10	19
,,	14	,,	12	15
,,	16	,,	8	13
,,	17	,,	10	10
,,	18	,,	10	10
,,	19	,,	8	14
,,		Black Sand	13	11
,,	20	Yield	8	10
,,	21	,,	14	15
,,	23	,,	4	3
,,	24	,,	16	13
,,	25	,,	21	9
,,	26	,,	10	5
,,	27	,,	13	14
,,	28	,,	16	9
,,	30	,,	11	15
Oct.	1	,,	13	3
,,	2	,,	13	0
,,	3	,,	6	3
,,	4	,,	6	6
,,	5	,,	5	11
,,	7	Stoppage one day		
,,	8	Yield	7	3
,,	9	,,	9	15
		Total	270	9

MARINER'S REEF QUARTZ MINING AND CRUSHING COMPANY, REGISTERED, *October* 10, 1872.—When the present contract for cutting down is completed (in about a month), preparations will be made for opening out to the reef southward, which can be carried on simultaneously with sinking if required. The proposed drive southward on the reef would be bearing in the direction of what was the richest ground over head, and I believe we should in a very short distance come into very paying stone. I hope soon to be enabled to report the raising of stone for crushing. The directors accepted the offer for working the present tailings at a tribute of 25 per cent. on the gross yield of the company. An agreement has been entered into with the parties, who are now engaged in erecting the requisite machinery, at a cost of about 1000*l.* Of course, we are at no expense or risk whatever. In about two months the tributers will be in full work. *Mine Manager's Report.*—We have the water in fork to the 550-feet level, and I was able to get into the blind shaft yesterday morning. The drive is standing pretty fair. We have plenty of muck-dirt and fixings to send up yet, so that I can hardly say when it will be best to start the south drive, fix the cistern, &c. I would like to begin it (the drive) in the break, if convenient, because we should sooner be out of the way from shaft; and as there will be no water at the level, I shall endeavour to put in the cistern, so as to make the plat the more handy for getting out timber, &c. I have had no opportunity of examining the stone yet at the bottom of the shaft. We shall want pumps when we start to sink again, and perhaps you can get them cheaper in Melbourne than up country. Either 8 in. or 9 in. will do. During the month the shaft has been cut down a farther depth of 49 feet, which has brought us to the bottom of the 550-feet level, or say, cut down 511 feet, and from brace 531 feet, which depth, 530 feet say, we may in future call this level. I expect it will be nearly a month longer before Ellery & Co. will finish their contract.

NORTH COSTERFIELD GOLD AND ANTIMONY MINING COMPANY, *October* 10, 1872.—*Mine Report.*—In the main shaft we have got down over 30 feet to date of last report, which I consider a very good start. In the whim shaft the work has not advanced so rapidly as we could have wished, the ground being hard; but we must be very near to the top of the main vein of antimony ore. The old company are still flourishing. Their last report shows I think 127 tons of antimony for the month, besides a fair yield of gold, which means very profitable work.

COSTERFIELD GOLD AND ANTIMONY, *September* 5.—During the past four weeks 125 tons were crushed, yielding 27 oz. 18 dwt. of gold; 130 tons antimony ore were obtained. Preparations are being made to receive the atmospheric engine in a chamber at the 420-feet level, and the necessary machinery is being constructed; the ordinary operations of the mine proceed as usual. *October* 30.—During the past four weeks 127 tons stone, yielding 30 oz. 17 dwt. of gold; 140 tons antimony ore were obtained. The chamber is nearly ready for the atmospheric engine at the 420-feet level, and it is expected that the machinery will be on the ground in a few days. Nothing new to report in the mine.

THE CENTRAL ENERGETIC, *Lauriston, September* 27.—Before letting the contract for sinking shaft, I found it would take the men a few days, on wages, to get things in order, such as putting in main ladder road down, engine shaft, taking up all rails out of the levels, &c. This was all finished, and the contract commenced last Tuesday week. The ground is pretty tight, but dry; the contractors have sunk 17 feet during the fortnight.

ENERGETIC, *Lauriston, September* 28.—During the past fortnight the shaft has been sunk a farther depth of 13 feet, making in all 145 feet below the 230-feet level, or 375 feet from the surface. We shall lower the lifts to-day, and put on another pump, which is the best we have on the ground. We shall have about 5 feet more to sink, and then it will take us a few days to repair the old shaft, and also to put new skids into the ground we have been sinking through, which will enable us to bring the cage and trucks down to the deepest level, and then we shall be in full swing to open out towards the reef. *October* 5.—The main shaft has been sunk 3 feet 6 inches, making it 426½ feet from the surface, the 500-feet level on the Energetic reef has been put in order, and will be driven north to the boundary, the North Energetic Company defraying half the cost of the drive.

NORTH ENERGETIC, *September* 28.—Crushed 197 tons for 90 oz. 6 dwt. 6 gr. gold: the returns is a fair average of the reef, and by all appearances there is a large quantity of payable stone in sight; the reef varies from 3 feet to 5 inches thick, stopes about 50 feet high. The machinery is in good order, and working very well.

HOPE WOOD'S POINT, *September* 16.—Cleaned up on the 14th instant for the following yields, which are all poorer than expected, viz., No. 4 Tribute, 17 oz. 7 dwt. 12 gr. from 90 tons; No. 5 Tribute, 8 oz. 14 dwt. from 60 tons; and for the company, 7 oz. 14 dwt. from 13 tons. No. 3 are still finding fair stone, and will be the next to crush. *September* 30.—Contractors are ready to commence sinking, and will start as soon as the survey is finished, and the site of shaft worked. They have got the logs, &c., required, and have set sawyers at work cutting slabs. Crushing will commence to-night for Nos. 3 and 5 tributors. The stone from No. 3 is a better sample than late crushings. No. 5 is poor; No. 4 have only just finished the drive they have been putting in to cut a leader they wished to work.

NEW NORTH CLUNES, *September* 3.—No. 1 level.—The north end is driven 378 feet from crosscut; the lode here is still broken. The south end is in 285 feet from crosscut; the lode is much the same as last reported; the rise north is up 74 feet, and the quartz has continued up 65 feet. The winze is sunk 72 feet, and the western crosscut is driven 156 feet from main drive. No. 5 level.—The east crosscut is driven 111 feet. No. 6 level.—The north end is in 163 feet; the lode here is still small and broken up. No. 7 level.—The north drive is in 325 feet; the lode here is again working, and is at present 18 inches wide. The south drive is in 295 feet; the lode is still over 5 feet wide, but does not look very well; the spur is driven on 129 feet; the lode is still small. *September* 17.—No. 1 level.—The north end is driven 196½ feet from crosscut; the lode here is still small and broken up. The south end is in 299 feet; there is a large lode in this drive, but it is not at present payable, The rise north is up to old No. 1 level, and winze south is sunk to No. 2 level. The west crosscut is driven 168 feet from main drive. No. 2 level.—The east crosscut has holed to winze, sunk from No. 1 level. No. 6 level.—The north end is driven 338 feet; the lode at present is 3 feet wide. The south end is in 311 feet; the lode here is over 5 feet wide, but there is no improvement in the quartz. The spar being driven on south is still small. The stopes throughout the mine are looking as usual. The sinking of winding shaft has been let at 6*l.* per foot. The west crosscut (pump shaft) has been very hard during past fortnight; it is in 64 feet, and the ground is now much easier. *September* 30.—No. 1 level.—The north end is driven 408 feet from the crosscut, without change to report. The south end is in 311 feet, and is still poor. The west crosscut is driven 198 feet from main drive; nothing has been struck here yet. No. 6 level.—The north drive is extended 200 feet from crosscut. The lode is making larger in the back of this level, and there is a considerable increase of water from it, which is a good indication of there being a body of stone farther north. No. 7 level.—The north drive is in 354 feet from crosscut; the lode is in about 3 feet wide.

THE AUSTRALIAN AND NEW ZEALAND DIVIDEND GOLD MINES INVESTMENT COMPANY, LIMITED.—*Progress.*—The news from the different mines is considered on the whole very fair. The Rose of Denmark, Garden Gully United, North Johnson's, and Old Chum Mines, show an improvement as regards the yields. Marineer's Reef will, in another month, have reached the level which will enable them to open out on the lode to the southward, and a tender has been accepted to work the tailings on tribute. The dividends this month are:—

Victoria Mines.

North Johnson's	6*d.* and	6*d.* per share.
Old Chum	1*s.* ,,	1*s.* 6*d.* ,,
Rose of Denmark	6*d.*	,,
Garden Gully United	6*d.*	,,
New North Clunes	20*s.*	,,

New Zealand Mines.

Caledonian Company, 40*s.* and 40*s.* per share.

The total amount for the three series is 60*l.* Calls have been made of 1*s.* on Hope Company, and 6*d.* New Moon Company shares.

THE PORT PHILLIP AND COLONIAL GOLD MINING COMPANY (LIMITED).—The Port Phillip and Colonial Gold Mining Company (Limited) have received the following advices from their resident director, dated Clunes, October 9th:—"The quantity of quartz crushed during the month ending September 10th was 4948 tons; pyrites treated, 19 tons; total gold obtained 1080 oz. 3 dwts., or an average per ton of 4 dwts. 8¾ grs. The receipts were 4161*l.* 9*s.* 8*d.*; payments, 3707*l.* 9*s.* 11*d.*; profit, 453*l.* 19*s.* 9*d.*, added to which was last month's balance of 260*l.* 17*s.* 9*d.*, making a total of 714*l.* 17*s.* 6*d.*, which was carried forward to next month's account. During the two weeks ending September 24th the quantity of quartz crushed was 2560 tons; pyrites treated, 8 tons; total gold obtained, 562 oz. 10 dwt., or an average per ton of 4 dwt. 9½ gr."

SOUTH AUSTRALIA.

THE MOONTA COPPER MINE, SOUTH AUSTRALIA.—The half yearly report of the Moonta Mining Company shows that over 10,000 tons of copper ore were raised during the six months, which yielded 169,000*l.* There is in hand a balance of 45,000*l.* worth of ore. The working expenses amount to 75,000*l.*, and there remains a balance in hand of 125,000*l.* Over 1300 hands are employed in the mine. The sum of 100,000*l.* was set apart for distribution among the shareholders.

NEW ZEALAND MINES.

ALBURNIA, *September* 2.—About five feet have been driven since the hard bar was cut through last week; country soft and jointy, and full of water. This morning another vein of water was tapped, and greatly increased the general outflow. And yet, notwithstanding this liberal discharge, not the slightest impression has yet been made on the water in the old workings above, which pretty clearly indicates that those workings have not yet been connected with on any stratum of country. Hence it is inferred that a small leader, about 2 inches thick, which was cut in the face of the drive on Saturday, is not the underlie of the specimen leader, or of any branch of it. The manager estimates that 20 feet has yet to be driven to reach the specimen vein, and 70 feet to the main lode. Now that the country has changed so much for the better, a month or six weeks ought to see both lodes in hand.

CALEDONIAN, *August* 31.—A very well-defined lode of from 2 feet to 3 feet thick is exposed in the new winze opened on No. 1 lode in the north end of the bottom level. The appearances of this part of the mine encourages the hopes entertained of meeting with the main shot of gold below the bottom level. There is a very nice band of stone, full of mineral, against the hanging wall, and in this gold has been found. Two stones containing the metal were taken out this morning. There is an excellent show in No. 1 lode, where it has been opened at an intermediate level from the Otago winze towards the No. 2 stope. This section of the lode promised, as my last report stated, to prove valuable, and current events are clearly demonstrating the truth of that assertion. The lode is both rich and large, its thickness being 4 feet to 5 feet, whilst gold in quantity is seen every shift. Last night 150lb. weight of good specimens were taken out. The lode also looks well in the old No. 2 stope. I noticed no change in the specimen lode stopes towards the Otago; gold was in sight there. The winze that is going down from the intermediate to the bottom level on this lode is taking a large body of stone with it. The hanging wall leader of the old stopes of No. 1 lode has been followed into solid country in the strike, and seems inclined to increase in size. It is quite 18 inches thick, and looks well. There is nothing fresh to report concerning the No. 2 lode workings, excepting that a trial parcel of 16 tons, taken from the back of the lode where the specimen lode rested on it at the intermediate level, has been crushed, and a return of 9 oz. 2 dwt. obtained. A trial crushing of the back of No. 2 lode, No. 1 level, will be made next week. *September* 14, 1872.—This morning, work in the mine was resumed, and the full force of the machine, including the tailings plant, was put in motion, an abundant supply of water being obtained from the Association's pump. The machine is in splendid working order, and its present excellent condition, the effect of many late improvements made in the gearing, is exceedingly creditable to the manager, Mr. Severn. The mine also looks well all over. During the past fortnight 1042 tons of stone were broken out and sent to mills, but not all crushed; there is still 300 tons lying on the battery floor; 150 tons are lying in the mine ready for lifting to the surface. Hence it is evident that there is no scarcity nor likely to be any of crushing dirt of first-rate quality. *September* 14.—5 cwt. specimens were taken out of the specimen lode north this afternoon. Latest reports from the Caledonian mine state that it is looking splendid. Shares are advancing; sales have been made at 38*l.* The return of gold for the past week amounts to 402 oz. *September* 21, 1872.—10 cwt. of specimens were brought up this morning. Mine generally looks well. I went through the mine this morning; there is no particular change to report, excepting that in consequence of the stopping of the Association's pump last night, the water rose in the new winze of the bottom level, and put a stop to the work there for the time being; there is no indication of a diminution in the size of the specimen lode north; but, on the contrary, every probability of a maintenance of its present large size for fathoms ahead of where the face now is. *September* 21, 1872.—The return of gold for the last week amounts to 805 oz. retorted. A capital show of gold was uncovered to-day in the winze on the specimen lode, between the intermediate and bottom levels.

IMPERIAL CROWN TRIBUTE.—57 oz. 6 dwt. have been obtained from the crushing of 33 tons of stuff finished to-day.

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

GOLDEN CROWN, *August* 31.—Yesterday the tributors resumed crushing with five head, they having opened up, at a lower level, another fairly auriferous section of the cross leader, which has given them profitable employment during the past twelve months. Gold was struck at 100 feet from the mouth of the drive, opened from the main level, and has been traced 90 feet along the leader, which runs from 18 in. to 2 feet thick. *September* 21, 1872.—The company disposed of 49 oz. melted gold to-day, and the tributors 59 oz. 1 dwt.

KURANUI COMPANY.—The fortnightly return of gold amounts to 129 oz. The attempts made to trace towards the slide the gold that was struck a week or two since between the 20 and 25 fathom levels, have not been attended by success, the country in that direction being very much broken up. Neither can the gold be traced upwards by rising, and the manager is now about to open a winze for the purpose of ascertaining if the patch continues downwards; the chances are in favour of his finding it there, for the gold is unquestionably part of a shot that may make into a continuous run by-and-bye. Good progress is being made with the work which the company is carrying on out of the Shotover shaft The drive towards the Long Drive mine has been extended 35 feet into the Long Drive ground, and has reached a promising channel of country. The crosscut towards the All Nations is yet in the Shotover ground, the country being hard and difficult to penetrate. The other drive that was turned off from the main crosscut in an opposite direction, to prove the Kuranui's ground is 30 feet past the boundary of the two mines and it is in likely country, easy to get through. Fortnight's return is, 125 oz. 11 dwt. melted gold.

UNITED PUMPING ASSOCIATION.—The water has been reduced to near the bottom of the shaft, and keeps in fork, hence the pump works at diminished speed, and throws very much less water than it did last week. About Wednesday next the manager hopes to resume sinking; meantime he is close planking the shaft to check the rush of the inpour of water, and so render the bottom tenable to the pitmen. The section of the old pump left in below a certain level is being taken out, and other preparations making to forward the main object in view, sinking. The engine was stopped last night, in order that the air pump and condensing gear might be relieved of the incrustations deposit by the mine water. The air bucket was found to be particularly dirty, its openings being clogged with cakes of mineral stuff nearly half an inch thick. The engine will start again this afternoon.

THE THAMES GOLD FIELDS, NEW ZEALAND.

DIVIDENDS.

The following dividends have been made payable since the publication of our last summary :—

Caledonian (September 12 and 24), 2*l.* each on 2,860 shares	£11,440	0	0
Cure (October 1), 6*s.* on 8000 shares	2,400	0	0
Thames (September 24), 7*s.* 6*d.* on 6000 shares	2,250	0	0
Bendigo Independent, 10*s.* on 540 shares	270	0	0
Total	£16,360	0	0

A dividend of 5*s.* per share in the Bright Smile, payable on the 5th September, amounting to £1375, was included in our last summary.

GOLD RETURNS FROM SEPTEMBER 3 TO OCTOBER 1.

Claim or Company	Stone crushed. Tons	cwt.	lb.	Gold. oz.	dwt.	gr.
Albion Tribute (Poverty) ...	30	0	0	*m*92	7	12
Alburnia, from tailings ...		—		12	10	0
Caledonian	200	0	0	402	0	0
Do.	400	0	0	1100	0	0
Do.	500	0	0	502	0	0
Do.	468	0	0	507	0	0
Golden Crown	80	0	0	*m*49	0	0
Do.	60	0	0	*m*31	4	0
Golden Crown Tribute ...	40	0	0	*m*59	1	0
Do.	32	0	0	*m*61	12	0
Do.	40	0	0	*m*52	6	0
Kuranui Company ...	250	0	0	128	0	0
Do.	250	0	0	95	10	0
Prince Imperial	20	0	0	*m*5	8	12
Tookey Tribute (Works) ...	20	0	0	16	8	0
Do. (Lowe's)	130	0	0	*m*552	1	0
Do. (Souden's)	27	0	0	*m*67	1	0
Tokatea, Coromandel ...	50	0	0	75	0	0

ST. ARNAUD MINES.

THE following account extracted from the *St. Arnaud Mercury*, of 21st September ult., of the mines a little south of the London and St. Arnaud property, is full of encouragement for the future of the latter property.

"In vain year after year and month after month have we been harping on the one theme of 'sink, sink, and prosper.' But our hopeful anticipations were looked upon as far too sanguine for general belief, and thus the scheme of searching for gold at depths beyond the power of the old windlass or whim has been regarded by the most of our small population as both wild and visionary; as a consequence the progress of our town, like the progress of our mines, for the last ten years has been almost stationary: but thanks to good luck, which generally rewards industry, and notwithstanding the strong inclination of the many to still yawn the facts to sleep, no one can at this moment deny but the three claims now at work below the water level on the Wilson's Hill line of reef, are turning out yields of the precious metal equal to any three claims on any line of reef in the colony of Victoria, and points to the prospect of unbounded improvement in mining pursuits in this district. No doubt most of our readers have within the last few months noticed from time to time the yields as reported in the *Mercury*, from 'Wilson's Hill,' the 'Chrysolite,' and 'Rising Star' claims; and highly satisfactory as these returns have been, they have been excelled this week from two out of the three referred to. Wilson's Hill tributors just washed off after a crushing of 720 tons, which gave 992 oz. of melted gold, or at the rate of close on 1 oz. 8 dwt. to the ton; and the Sandhurst and St. Arnaud Chrysolite Company got 163 oz. 8 dwt. for a fortnight's crushing from eight head of stamps, which is quite equal to an ounce to the ton; and the Rising Star Company adjoining, are engaged crushing a kiln of from 700 to 800 tons, which is expected to give over an ounce to the ton. Solid returns of this description from reefs averaging many feet in thickness, coming from a depth of 150 feet under the water level, and nearly 400 feet from the surface, will do more than solid argument in properly developing our reefs at great depths, and bring to the surface that treasure which it is hard to convince the sloths and moles exists there.—*St. Arnaud Mercury*, September 21st, 1872.

THE RISING STAR COMPANY are still breaking first-class quartz from the stopes. They started to crush on Thursday, and it is expected that with the quantity on hand they will be able to keep the battery going for several months, and no doubt it will be the best average lot ever crushed from the mine.

THE SANDHURST AND SAINT ARNAUD CHRYSOLITE TRIBUTE COMPANY washed upon Saturday last, and got 163 oz. 8 dwt. of gold for the fortnight. This was the produce from eight head of stamps, which were not running full time. The bulk of the quartz was broken from the 270 feet level, it being about 90 feet below the water level. The reefs in this claim, like those in the adjoining — Wilson's Hill — improve both as regards permanency and yield as depth is attained.

THE Tributors (Wilson's Hill) washed up on Monday: 720 tons had passed through the battery, which yielded 1160 oz. of retorted gold, which on being smelted was reduced to a bar of 992 oz. A mishap to the crucible in the operation of smelting, it is supposed, has left sufficient scraps on hand to bring the cake up to 1000 oz. This is the largest piece of gold we ever saw from one crushing on St. Arnaud, and ought to be a good guarantee for the permanency of the reefs in this district. The quartz was broken out at a depth of about 350 feet, or 120 feet below the water level.

The North Costerfield Gold and Antimony Mining Company. No Liability. Costerfield, near Bendigo, Victoria, Australia.

Capital 50,000*l.* in 50,000 Shares of 1*l.* each.
Paid up 10*s.* per Share, viz. :—

20,000 Shares of 1*l.* each, 10*s.* per Share paid, = 10,000*l.* allotted in the Colony.
30,000 Shares of 1*l.* each, 10*s.* per Share paid, = 15,000*l.* to be allotted in England.

50,000 Shares. 25,000*l.* called up.

The London Agent has instructions to offer the above parcel of 30,000 Shares :—

2*s.* 6*d.* per Share to be paid on Application; 2*s.* 6*d.* on Allotment; and 5*s.* in Three Months after Allotment. The Balance, if required, in Calls not exceeding 1*s.* per Share per month.

It is estimated, however, that 10*s.* per Share will be quite sufficient for all purposes of the undertaking.

Directors in the Colony.

Robert Burrowes, Esq., M.L.A., Member of the Legislative Assembly for Sandhurst, Bendigo.

Thomson Moore, Esq., M.L.A., Member of the Legislative Assembly for Mandurang, Bendigo.

Samuel P. Lord, Esq., J.P., Melbourne.

D. A. Osborne, Esq., Melbourne.

Dr. Fitzgerald, Melbourne.

William Gardiner Sprigg, Esq., Melbourne.

London Agent.

Thomas Dicker, Esq. (formerly Editor and Proprietor of *Dicker's Mining Record*, Melbourne.)

Offices.

4, Royal Exchange Avenue, London, E.C.

The object of this Company is to work the extensive property known as the North Costerfield Mine, for both gold and antimony. Its area is 25 acres 2 roods and 4 perches, with a length on the course of the lode of 1613 feet.

The Mine adjoins the well-known Costerfield property. The lode runs between solid and well-defined walls, without fault or break, and *bears the reputation of being the finest Antimony lode in the world.—Vide* Report of J. Brache, Esq., Civil and Mining Engineer, late Superintendent of Mining Surveys to the Geological Department, Melbourne.

This Company is registered in Melbourne under the "No Liability" clause of the "Limited Liability" Act of the Colony of Victoria, which limits the amount to be called up to 1*l.* per Share.

Plans and prospectuses with the fullest information may be had, and samples of ore taken from both mines can be seen, upon application to the London Agent (who has personally inspected the lode), 4, Royal Exchange Avenue, London, E.C.

DICKER'S AUSTRALIAN AND LONDON MINING AND GENERAL AGENCY.

4, ROYAL EXCHANGE AVENUE, LONDON, E.C.

List of Shares for sale in Australian and New Zealand Mines, under limited liability.

Mariner's Reef (Gold) Quartz Mining and Crushing Company.

The Winter's Freehold Gold Mining Company, Limited, Ballarat, Victoria.

Australian and New Zealand Dividend Gold Mines Investment Company, Limited, No. 1, *No.* 2, *and No.* 3 *Series.*

Golden Crown Gold Mining Company, Limited, Thames River, Auckland, N.Z.

The London and Thames River, N.Z., Golden Crown Company, Limited.

The Imperial Crown Gold Mining Company, Limited, Thames River, Auckland, N.Z.

Albion Gold Mining Company, Thames River, Auckland, No. 3.

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

ROWE BROTHERS GOLD MINING COMPANY.

(Continued from page 3.)

disadvantages. Their shaft is too narrow, and their drives are tortuous and low in the roof, while their crushing battery is a mile and a half from their Mine. But when all this has been said, *it has still to be admitted that they have one of the most valuable mining properties in the colony*, and deserve to have it, since it is the result of their own industry and perseverance. To describe the underground phenomena of the great Mine so as to be intelligible to readers who have never gone over a quartz mine would not be easy. But a general notion of it may be gathered from these few facts. It is the Crown claim of a belt of auriferous quartz country 1000 feet wide, and comprises several reefs, each having branches or leaders. It has great chambers or caverns, some as big as houses, from which an immense quantity of gold-bearing stone has been taken out, and still the Mine would seem to have been, so far, only scratched over.

If good winding and pumping machinery were erected, and a sufficiently effective stamping battery provided on the spot, the drives being also strengthened and improved, and fitted with tramroads, as is the custom in well-organized mines, the 400l. a week which the Mine now yields might be increased tenfold. Heretofore, it has given from 12 dwt. to 16 dwt. to the ton of quartz; and the stone being easy to get, and of apparently unlimited quantity, the prospects of the New Company which is being formed to purchase and work the Mine are of the most encouraging character.

Of the five-and-twenty hands engaged in their Mine and crushing-house, a considerable proportion are their own sons or sons-in-law, and the habit of the family is to carry its billy of tea and its dinner to the Mine quite like other diggers. One incident that has been mentioned will tend to show what kind of people they are. One of them, who belongs to the second generation, has been employed all his life in carting quartz from the pit-mouth to the stamping battery, and when 90,000*l.* was offered for the Mine, a difficulty arose in regard to him. He had never done anything else beside driving a horse in a dray, and there was no evidence before the family that he could drive a horse laden with anything else than quartz. It seemed, therefore, that if the Mine were sold this youth would be thrown out of work, and unless local rumour is a liar, this little difficulty retarded for some time the completion of the arrangements under which the Mine is to be sold.

Report from Mr. Charles Kinnear, formerly of Port Phillip and Colonial Gold Mining Company, Clunes.

BALLARAT, *January* 29, 1872.

MESSRS. WILLDER, STERNE, & WILEMAN.

GENTLEMEN,

I have the honour to report having made an inspection of the Mine of Messrs. ROWE BROTHERS, Fryer's Creek, as requested by you. I must do the venture the justice to say that I did not expect to find, after so many years' work done therein by the proprietors, such an immense mass of payable quartz still available. There are five named reefs in the ground; in fact, the greater part of the hill appears composed of auriferous quartz veins, the portion mined by the Messrs. ROWE bearing a very small proportion to the whole. They have simply driven a few levels and cross-cuts, merely serving to *indicate rather than to develop the extent and value of the lodes;* beyond this no work has been done in the Mine worth naming. The above works must be considered initiatory only. Nor is there any indication that the stone removed may have been of a better quality than that which remains. The Bank will, I assume, give the actual value of the gold obtained, but as collateral evidence of the uniform value of the quartz (allowing for the refuse and soil used in filling up) not one hundredweight of the stone hitherto raised remains on the surface uncrushed, notwithstanding their having to cart it one mile and a half to the battery over very difficult ground; these two facts, in conjunction with the foregoing, struck me as bearing most unequivocal testimony to the value of the venture. *In almost every portion of the Mine I saw gold in situ.* But any detailed description I could give would fall far short of the comprehensiveness and perspicuity of the plan and sections of the Mine, together with suggestions and estimates prepared by Mr. Surveyor Amos, which I had also the pleasure of inspecting, and which very clearly show the amount of work done, and the quantity of stone at present in view. With regard to probable permanency of the venture, I can testify to the fact that at the lowest level yet worked by the Messrs. ROWE, and from which they are now removing stone, the reef is about 75 feet wide, with every indication of continuity to any depth as good as that explored. It was in this level I saw the best gold-bearing quartz during my inspection. In conclusion, I may safely congratulate you on possessing in Messrs. ROWE BROTHERS' Mine a most permanently valuable property.

I have the honour to be, gentlemen,

Yours most obediently,

(Signed) CHAS. KINNEAR.

Abstract of Monthly Pay-sheets and Returns, from April to December, 1871, showing the Expenses, Returns, and Nett Profits during Nine Months:

		£	s.	d.
1871.	April.—Carting 375 tons at 2*s.* .	37	10	0
	Crushing 375 tons at 3*s.*	56	5	0
	130 lb. candles, at 5*d.* lb.	2	14	2
	50 lb. powder, at 9*d.* .	1	17	6
	6 coils of fuse, at 10*d.* doz.	0	5	0
	Wages, as per day-book	128	9	0
	Total expenses for April .	£227	0	8

—	Expenses.	Tons Crushed.	Gold Extracted.	Sold to Bank for	Nett Profits.
	£ s. d.		oz. dwt. gr.	£ s. d.	£ s. d.
April ...	227 0 8	375	239 11 0	946 4 6	719 3 10
May ...	231 6 4	367	234 9 0	925 19 6	694 13 2
June ...	249 19 8	411	279 12 16	1,104 10 5	854 10 7
July ...	246 17 4	355	223 12 4	883 4 9	636 7 5
Aug. ...	275 0 3	400	321 3 18	1,268 14 0	993 13 9
Sept. ...	261 5 6	370	259 0 7	1,023 17 3	762 11 9
Oct. ...	232 17 2	250	200 18 12	793 13 0	560 15 10
Nov. ...	283 8 6	450	403 10 9	1,593 18 6	1,310 10 0
Dec. ...	452 19 9	855	799 8 0	2,997 18 0	2,544 18 3
Totals...	2,460 15 2	3,833	2,960 8 18	11,537 19 9	9,077 4 7

Average monthly number of tons of quartz reduced, 426 tons.

Average monthly ounces of gold extracted therefrom, 329 ounces.

Average monthly returns by sales of gold, 1,281*l.* 15*s.* 6*d.*

Average monthly expenses, 273*l.* 8*s.* 4*d.*

Average monthly nett profits, 1,008 11*s.* 6*d.*

Or a nett profit of 13,002*l.* 18*s.* per annum, with no machinery on the claim.

Yields since the above, from and including February, 1872:—

	Gold. Oz.	dwt.	gr.		Value. £	s.	d.
February	405	3	17	sold for	1539	14	
March	357	5	3	,,	1357	11	3
	762	9	0		2897	5	3
(Easter holidays intervened.)							
April	394	0	0	,,	1498	0	0
May	445	0	0	,,	1700	0	0
					3198	0	0
					2897	0	0
				Value of gold	£6095	0	0

6095*l.* less 1000*l.* working expenses for four months = 5095 nett profit for the four months ending May.

The monthly yields have ranged this year from 400 to 445 oz., with the exception of two months, when the exceptionally heavy rains of last winter prevented them from carting stone to the batteries.

AUSTRALIAN & NEW ZEALAND DIVIDEND GOLD MINES INVESTMENT CO. (Limited).

No. 1, No. 2, and No. 3 SERIES.

Shares can be obtained in each of No. 1 and No. 2 Series. Apply at 4, Royal Exchange Avenue, E.C.

No. 3 SERIES.—A small balance of these Shares to be had at par.

AUSTRALIAN AND NEW ZEALAND DIVIDEND PAYING AND PROGRESSIVE MINES.—Full and reliable information, with list of sound mines for investment, may be obtained on application to Thomas Dicker (late Editor and Proprietor of "Mining Record," Melbourne), 4, Royal Exchange Avenue, London, E.C.

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

ROWE BROTHERS GOLD MINING COMPANY,

LIMITED,

GOLDEN GULLY, FRYER'S CREEK,

NEAR CASTLEMAINE, VICTORIA, AUSTRALIA.

CAPITAL £100,000, IN 50,000 SHARES OF £2 EACH.

40,000 *Shares allotted in the Colony.*

10,000 *Shares offered in the London Market.*

A large portion of these Shares has been already applied for.

ALL profits from the Mine subsequent to the 14th August ultimo, are credited to this Company.

Dividends to English Shareholders will be paid at the London Office of the Company, Royal Exchange Avenue, London, E.C.

A cable message from Melbourne was received by the London Agent, on 22nd November, informing him that the accrued profits to the end of January next, will, it is expected, amount to £10,000; thus showing the Mine is maintaining its high reputation.

Even at the present time, with mining operations carried on, so to speak, against all light and knowledge, the profits are equivalent to about 15 per cent. per annum upon the capital of £100,000. But with the greatly increased facilities, to be added forthwith, it is estimated these profits will be increased at least fourfold.

The GOVERNMENT MINING SURVEYOR (Mark Amos, Esq.) estimates the quantity of quartz standing between the surface and 113 feet in depth at 399,860 tons, and to 400 feet at 806,760 tons.

The first-named quantity, viz., 399,860 tons, would give uninterrupted employment for 60 head of stamps for at least twelve years

"Estimated cost of reducing, I think, may be fairly taken at nine (9) shillings per ton, so that by crushing 600 tons weekly, with an average yield of 15 dwt. per ton, a profit of £1530 ensues; by yield of an ounce per ton, £2130 weekly accrues, or £110,760 per annum."

The *ARGUS* SPECIAL REPORTER upon this point says:—

"At 40 feet from the surface, at 70 feet, and at 100 feet, there are immense bodies of auriferous stone. There are also some workings at intermediate depths, and for anything that is yet known, the Mine may be profitably worked to a depth of a 1000 feet.

"At the lowest level yet opened out the lode is 120 feet thick. Though the claim is only nine or ten acres in extent, the lives of its present Owners would not suffice to exhaust its treasures, if it continued to be worked at the present rate. It is too big a thing for the ROWES. It has grown under their hands, and they have never adapted their system or management to its extent and value. Consequently, they work under many disadvantages. Their shaft is too narrow and their drives are totuous and low in the roof, while their crushing battery is a mile and a half from their Mine. But when all this has been said, it has still to be admitted that they have one of the most valuable mining properties in the colony."

Mr. CHARLES KINNEAR in his report says:—

"The greater part of the hill appears composed of auriferous quartz veins. The ROWES have simply driven a few levels and crosscuts, merely serving to indicate rather than develop the extent and value of the lodes; beyond this no work has been done in the Mine worth naming. In almost every portion of the Mine I saw gold in situ."

The *BENDIGO ADVERTISER* states:—

"The whole impression created by the visit to the claim was, that it is one of the few situated on great lines of reef which seem to be in just the place where the reef has risen the highest and made the most gold, like the Collman and Tacchi, the Frederick the Great, the Wilsons, &c."

"James, Edward and Hannibal Orchard Rowe are said to have already netted some £50,000 a piece."

Prospectuses, Reports, &c., and all information to be obtained of the London Agent, THOMAS DICKER, 4, Royal Exchange Avenue, London, E.C.

London: Printed by HEAD, HOLE & Co., Nos. 11 to 13, Harp Alley, Farringdon Street, and Ivy Lane, Paternoster Row, E.C., for RICHARD MIDDLETON and HENRY ENGLISH (the proprietors), at their office, 26, Fleet Street, E.C., where all communications are requested to be addressed.—Saturday, December 7, 1872.